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ABSTRACT

Surveys concerned with salaries of scientists, engineers, and technicians have been compiled in this report; sources of the original surveys include agencies and departments of the federal government, professional scientific and engineering societies, educational associations, magazine publishers, and other professional organizations. Data are reported in tables organized under the following categories: starting salaries, salaries of experienced scientific and technical personnel, salaries of engineers, federal salaries, and academic salaries. The base and time period for each table are noted with the table and/or in the introductory statement for the section in which it appears. No attempt has been made to evaluate the relative reliability of the samples. The source of the data is given at the beginning of each table, and full bibliographic information for all sources is provided at the end of the report. (Author/DT)

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SALARIES
OF
SCIENTISTS • ENGINEERS AND TECHNICIANS

··· A Summary Of Salary Surveys ···

SMC

Prepared by
SCIENTIFIC MANPOWER COMMISSION
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The Scientific Manpower Commission, A Participating Organization of the American Association for the Advancement of Science, is a nonprofit corporation whose Commissioners represent its sponsoring scientific societies.

The Commission is charged with the collection, analysis and dissemination of reliable information pertaining to the manpower resources of the United States in the fields of science and technology; promotion of the best possible programs of education and training of potential scientists and technicians; and development of policies of utilization of scientific and technological manpower by educational institutions, industry and government for optimum benefit to the nation.

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INTRODUCTION

Salary surveys are conducted by a number of organizations - agencies and departments of the federal government, professional scientific and engineering societies, educational associations, magazine publishers, and other professional associations. Some surveys deal directly with salaries of scientists and engineers while others are concerned with much broader occupational areas. When broader occupational groups are included in the surveys, selected categories are used in this report for comparative purposes.

Although most of the statistical information in this report is available from its original source, this compilation brings together salary information in the special areas of science and engineering, both for purposes of comparison and for readier accessibility.

In general, exact correlation of results of different surveys is not possible without access to the original data - first because the bases used in various surveys for presenting statistical results include medians, means, percentiles, and average; and second because the time periods include calendar year, fiscal year, academic year and quarterly segments starting at various points in the year. The base and time period for each table is noted with the table and/or in the introductory statement for the section in which it appears.

Where comparisons of similar data are possible, some apparent discrepancies appear. No attempt has been made to evaluate the relative reliability of the samples, but the number of people in the sample is given when it is available. In many cases, the number of respondents listed within the table will not match totals for all fields or all groups, because some areas not applicable to science and engineering have been omitted, or because only selected years since first degree or selected age groups have been included.

The source is given at the beginning of each table. Full bibliographic data for all sources of information begin on page 104.

This report was prepared by Eleanor Babco, Administrative Assistant of the Scientific Manpower Commission. Special thanks are extended to Cheryl Jones for her invaluable assistance.

STARTING SALARIES

- The *College Placement Council's A STUDY OF 1974-75 BEGINNING OFFERS, FINAL REPORT* provides beginning salary data based on offers (not acceptances) made to new male and female graduates at all degree levels in selected curricula and graduate programs during the normal recruiting period, September to June. The data are based on information submitted by a representative group of 156 colleges throughout the United States. The survey, which covers job openings in a broad range of functional areas, except teaching, within employing organizations in business, industry, government and nonprofit and educational institutions, is issued three times a year.

In the final report of the 1974-75 recruiting year, CPC reports a substantial decline in the number of offers. At the bachelor's level, offers are down 24% from 1973-74; at the master's level down 18%; and for Ph.D.'s, down 37%.

Despite the drop in number of offers, the average dollar values in the engineering disciplines continued to rise. Increases in the various engineering specialties increased from 9% to nearly 15%, with offers to B.S. chemical engineers leading at $1,196 per month, followed by metallurgical engineering at $1,132 and electrical engineering at $1,122 (Table 1).

In the nonengineering categories, percentage increases were more modest. The accounting average rose 6% to $981 and the business average went up 5% to $843 (Table 1). The smallest increases - all under 5% - were experienced by the agricultural sciences, marketing and distribution, humanities, social sciences and mathematics.

Despite an emphasis on hiring more women, they too received fewer job offers than in the 1973-74 recruiting season, down 13% compared with a 26% decrease for men. However, women majoring in business disciplines received 14% more offers than in 1973-74. Forty five percent of all offers to women graduates were made to business majors, compared to 34% last year.

Women majoring in accounting and most engineering disciplines received slightly higher salary offers than men. In all other disciplines, salary offers to women were lower (Table 2).

By functional area, engineering positions made up 48% of all the offers reported at the bachelor's level. Of the bachelor's total, 86% of the offers were to men and 14% to women. Highest dollar offers by functional area in 1974-75 were reported in engineering - $1,109 for men and $1,144 for women; followed by manufacturing and/or industrial operations - $1,066 for men and $959 for women; and training and development (technical) - $1,060 for men and $989 for women (Table 3).

Top dollar offers, averaging $1,128, were reported by manufacturing/industrial firms (Table 4).

Tables 5 and 6 show number and average monthly salary offers to men and women bachelor's degree candidates by type of employer. Bachelor's degree candidates in technical curricula had higher average dollar offers from all types of employers except business; and men's offers were higher in all cases than those made to women.

At the master's degree level, 61% of all the offers went to MBA candidates, with those having a non-technical undergraduate degree receiving the most offers. The highest dollar average was for MBA candidates with a technical background - $1,324 a month; followed by chemical engineering, $1,310; mechanical engineering, $1,274; and MBA's with a non-technical background, $1,250 (Table 7).

The number of offers to women master's candidates increased 11% from last year, with 70% of the women's volume being in the MBA categories as against 57% in 1973-74. The pattern of dollar average differential between men and women which was evident at the bachelor's level (except in engineering and accounting) was not repeated. Of the 15 graduate programs covered, the salary averages for women were higher than for men in eight; and lower in the other seven.

Average monthly starting salary offers to master's degree candidates by graduate program and type of employer are shown in Table 8.

By type of employer, manufacturing and industrial firms made the sharpest cutback in recruiting activity at the bachelor's level - decreasing 29% in the number of offers. The largest reductions were made by automotive and mechanical equipment, tire and rubber, and public utilities. Only petroleum firms and food and beverage processing firms made more offers than last year, increasing 27% and 1% respectively.

Moderate increases in dollar averages at the doctoral level were reported, with only mathematics (increasing by more than 13% to $1,523 a month) and mechanical engineering (increasing nearly 10% to $1,624) experiencing gains of over 7%. The top dollar average was in chemical engineering at $1,645, followed by mechanical engineering at $1,624 (Table 9).

- *Frank S. Endicott's* 29th annual survey of *TRENDS IN EMPLOYMENT OF COLLEGE AND UNIVERSITY GRADUATES IN BUSINESS AND INDUSTRY, 1975* compiles statistics from 160 well-known companies in 23 states and Washington, D. C., representing all major regions of the country. Company responses indicated that some corporations were planning to reduce substantially the number of college and university graduates to be employed from 1975 classes.

By field, male bachelor's degree graduates in engineering commanded the highest monthly starting salary - $1,062, followed by graduates in chemistry, $992, and in accounting at $990. At the master's level, MBA's with a technical undergraduate degree led the salary list at $1,267, followed by master's degree accounting graduates at $1,256. Although master's degree engineers had the highest percent increase in salaries from 1974 to 1975, they did not receive the highest salary offers (Table 10).

For women, the figures are not completely comparable, but women engineers had average starting salaries of $1,075, liberal arts majors $784, math/statistics $918 and science majors $950, (Table 11). Starting salaries for men and women by field is shown in Table 12.

Although engineers show the highest starting salaries, an examination of the average monthly earnings of college men employed five years ago (class of 1959) and ten years ago (class of 1964) found engineers still held a slight salary lead after five yeears, but after ten years, salaries in accounting and sales were higher than those in engineering, (Table 13).

- Preliminary results from the 1975 starting salary survey conducted by the *American Chemical Society* indicate that the median starting salaries of chemists have either decreased or increased only slightly depending upon degree level from 1974. For chemical engineering graduates, the salary increases are considerably better (Table 14).

By type of employer, B.S. chemists working in manufacturing industries earned the highest starting salary - $10,500 per year, followed by chemists working in state and local governments. Only limited data are available for bachelor's degree chemical engineers by type of employer, with manufacturing industries paying

B.S. chemical engineers a starting salary of $14,400 (Table 15). It is particularly interesting to note that the median salary of new B.S. male chemists working for manufacturing industries was $10,200 while women B.S. chemists had a median salary of $11,500 per year.

Median starting salaries for chemists and chemical engineers also depend on geographic location with B.S. chemists getting the highest salaries in the east north central region ($10,500) and least in the New England states ($8,300); while B.S. chemical engineers earn the most in the west south central ($14,700) and least in the Pacific region ($13,800), (Table 16).

Because the 1975 starting salary figures are still preliminary, final data from the *1974 SURVEY REPORT - STARTING SALARIES AND EMPLOYMENT STATUS OF CHEMISTRY AND CHEMICAL ENGINEERING GRADUATES* is presented.

Table 17 shows median starting salaries of chemists and chemical engineers by degree level and type of employer for 1974. By type of employer, bachelor's degree chemists earned the most working in industry, and the least working in colleges and universities. Nonprofit organizations paid B.S. chemical engineers the most - $13,400 - and the federal government paid the least - $11,300.

By geographic region in 1974, chemists earned most in the west south central region - $10,700; Ph.D. chemists were paid highest in the Pacific region - $16,600; and B.S. chemical engineers earned the highest salaries in the east north central and west south central - $12,800, (Table 18).

Monthly starting salaries for B.S. men and women chemists are compared in Table 19. In 1974, male chemists earned only 2.1% more than women chemists, cutting the salary differential from 1973 by more than 100%.

Table 20 presents 1974 starting salaries for men and women chemists by degree level and type of employer. Women B.S. beginning chemists working in industry, state and local government, colleges and universities, and high schools earn more than do their male counterparts.

By chemical specialty, master's degree analytical chemists earn the most and biochemists the least (Table 21).

- The *American Geological Institute* reports starting salaries for geoscientists at all degree levels are up from 1973 (Table 22). Annual salaries for bachelor's degree candidates increased 11.5%; for master's degree candidates, 7.3% and for doctoral degree candidates 3.8%. Table 23 shows that industry paid the highest salaries in both 1973 and 1974 for all degree levels.

- The *American Institute of Physics* reports that industry was the biggest employer of new physics bachelor's degree recipients and also paid the highest starting salaries (Table 24). Men earned higher salaries than did their women counterparts.

Industry again paid the highest salaries for graduate physicists - $1,070 for master's degree recipients and $1,485 for doctoral degree recipients (Table 25).

- The 1975 survey by the *American Mathematical Society* found that 83% of the new mathematics doctorates accepted academic positions, 11% took positions in business and industry and 6% in government, including federal, state and local governments. Business and industry paid the highest starting salaries for Ph.D.'s in the mathematical sciences - $18,900 for men and $17,500 for women (Table 26). Table 27 shows that overall median beginning salaries for Ph.D.'s in mathematics decreased from 1974 to 1975, with salaries in business and industry dropping to $18,700 from the 1974 figure of $19,000.

- The *Battelle Columbus Laboratories'* NATIONAL SURVEY OF COMPENSATION PAID SCIENTISTS AND ENGINEERS ENGAGED IN RESEARCH AND DEVELOPMENT ACTIVITIES for 1974 found that engineers led other disciplines in starting salaries for all degree levels (Table 28). Of the various engineering disciplines that were studied, chemical engineers were paid the highest starting salaries - $1,082, followed by materials engineers at $1,025 and nuclear engineers at $1,023 (Table 29).

- The *U. S. Department of Labor's* OCCUPATIONAL OUTLOOK HANDBOOK includes starting salary information and estimates the number of personnel employed in various fields. A selected list of scientific and engineering personnel data are summarized in Table 30.

Average monthly starting salaries for mechanical engineering graduates by degree level from 1961 to 1974 are shown in Table 31.

- The *Engineering Manpower Commission* reports mean monthly starting salaries of bachelor's degree technology graduates and associate degree technology graduates by curriculum in 1975 in Tables 32 and 33. Bachelor's degree technology graduates who received their degree in industrial technology and mechanical technology earned the highest starting salaries - $972 per month. For associate degree technology graduates, those who studied the construction curriculum received the highest salary offers - $821 per month.

SOURCE: The College Placement Council, A Study of 1974-75 Beginning Offers, Final Report, July 1975

TABLE 1 - NUMBER AND AVERAGE STARTING MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES BY CURRICULUM, 1974-75

CURRICULUM	No. Offers 1974-75 Total	AVERAGE $ OFFER		1974-75 Total change from 1973-74 Total (=100)
		1974-75 Total	1973-74 Total	
BUSINESS				
Accounting	4,466	$ 981	925	106.1
Business-General (inc. Management)	2,255	843	803	105.0
Marketing & Distribution	795	801	769	104.2
ENGINEERING				
Aeronautical	206	1,074	961	111.8
Chemical	2,680	1,196	1,042	114.8
Civil	2,608	1,064	967	110.0
Electrical	2,986	1,081	986	109.6
Industrial	665	1,080	979	110.3
Mechanical	3,209	1,122	1,001	112.1
Metallurgical	306	1,132	1,004	112.7
Technology	568	1,012	934	108.4
HUMANITIES AND SOCIAL SCIENCES				
Humanities	648	723	691	104.6
Social Sciences	1,046	770	737	104.5
SCIENCES				
Agricultural	478	815	785	103.8
Biological	220	772	720	107.2
Chemistry	176	956	884	108.1
Computer	401	975	915	106.6
Health (Medical) Professions	206	806	733	110.0
Mathematics	406	915	874	104.7
Other Physical & Earth Sciences	126	999	895	111.6

SOURCE: The College Placement Council, A Study of 1974-75 Beginning Offers, Final Report, July 1975

TABLE 2 - AVERAGE STARTING MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES BY CURRICULUM AND SEX, 1973-74 AND 1974-75

CURRICULUM	No. Offers 1974-75 Total		Average $ Offers 1974-75 Total		No. Offers 1973-74 Total		Average $ Offers 1973-74 Total	
	Men	Women	Men	Women	Men	Women	Men	Women
BUSINESS								
Accounting	3,571	895	$ 980	$ 984	4,262	729	$ 925	$ 923
Business-General (inc. Management)	1,864	391	847	822	2,706	347	809	756
Marketing & Distribution	598	197	810	772	883	223	782	721
ENGINEERING								
Aeronautical	198	8	1,074	1,071	251	12	960	994
Chemical	2,518	162	1,196	1,197	3,281	129	1,042	1,033
Civil	2,540	68	1,064	1,098	2,933	91	967	971
Electrical	2,925	61	1,080	1,116	4,481	87	986	1,001
Industrial	625	40	1,079	1,089	1,081	42	978	1,015
Mechanical	3,146	63	1,122	1,128	4,564	68	1,001	1,004
Metallurgical*	286	20	1,134	1,098	441	18	1,003	1,015
Technology	557	11	1,011	1,051	611	12	934	900
HUMANITIES & SOCIAL SCIENCES								
Humanities	333	315	759	686	421	437	728	655
Social Sciences	608	438	803	725	847	621	766	696
SCIENCES								
Agricultural	445	33	817	781	374	20	789	728
Biological	123	97	800	736	139	80	751	664
Chemistry	115	61	962	944	195	85	891	867
Computer	304	97	977	971	476	117	920	895
Health (Medical Professions)	44	162	868	789	14	273	727	734
Mathematics	211	195	924	906	344	388	878	871
Other Physical & Earth	111	15	1,012	901	186	37	898	878

*Includes Metallurgy & Engineering-Ceramics.

SOURCE: College Placement Council, A Study of 1974-75 Beginning Offers, Final Report, July 1975

TABLE 3 - NATIONAL AVERAGE MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES BY FUNCTIONAL AREA AND SEX, 1973-74 AND 1974-75

FUNCTIONAL AREA	No. Offers 1974-75 Total		Average $ Offers 1974-75 Total		No. Offers 1973-74 Total		Average $ Offers 1973-74 Total	
	Men	Women	Men	Women	Men	Women	Men	Women
Accounting/Auditing	3,660	946	$ 980	$ 974	4,283	780	$925	$ 914
Business Administration	669	216	832	743	847	232	806	696
Communications	83	66	765	683	90	88	732	631
Community and Service Organizations Work	94	85	717	683	102	100	696	636
EDP - Programming/Systems	423	181	953	930	655	244	899	878
Engineering	11,376	388	1,109	1,144	15,865	412	995	1,002
Farm and Natural Resources Management	118	4	800	702	152	4	769	590
Finance and Economics	325	93	844	835	433	116	815	794
Health (Medical) Services	74	184	815	781	50	305	735	709
Home Economics and Dietetics	7	25	827	689	7	35	747	666
Law Enforcement Services	65	9	822	736	74	12	880	749
Library and Related Work	1	16	667	599	4	10	755	595
Manufacturing and/or Industrial Operations	838	59	1,066	959	996	60	944	886
Marketing - Consumer Prod./Services	619	126	832	748	766	155	784	721
Marketing - Industrial Prod./Services	387	49	937	890	614	56	872	847
Mathematics/Statistics	126	81	907	909	183	146	865	855
Merchandising/Sales Promotion	486	224	778	727	519	238	744	688
Personnel/Employee Relations	77	46	818	752	177	104	795	653
Public Administration	61	35	775	673	55	39	756	668
Research - Non-Scientific	71	51	906	752	79	53	876	726
Research - Scientific	292	124	969	834	463	182	919	830
Training & Development - Technical	656	64	1,060	989	969	83	958	846
Training & Development - Non-Technical	614	257	803	773	1,107	362	772	739

SOURCE: College Placement Council, A Study of 1974-75 Beginning Offers, Final Report, July 1975

TABLE 4 - NUMBER AND AVERAGE MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES BY FUNCTIONAL AREA AND EMPLOYER, 1974-75*

FUNCTIONAL AREA	TYPE OF EMPLOYER				
	Business	Manufacturing /Industrial	Federal Government	Local & State Government	NonProfit Organizations
Accounting/Auditing	(3,378) $996	(983) $ 951	(120) $849	(99) $866	(26) $802
Business Administration	(364) 752	(384) 893	(49) 769	(39) 751	(49) 689
Communications	(75) 633	(44) 917	(5) 774	(5) 826	(20) 638
Community and Service Organizations Work	(1) 644		(17) 729	(94) 703	(67) 692
EDP-Programming/Systems	(102) 850	(452) 977	(18) 897	(16) 875	(16) 809
Engineering	(36) 990	(10,438) 1,128	(897) 972	(380) 934	(13) 951
Farm and Natural Resources Management	(20) 787	(56) 814	(30) 781	(12) 781	(4) 763
Finance and Economics	(270) 799	(116) 948	(22) 843	(4) 803	(6) 771
Health (Med.) Services	(15) 943	(15) 864	(8) 775	(16) 691	(204) 783
Home Economics and Dietetics	(4) 644	(13) 734	(3) 718	(4) 713	(8) 738
Manufacturing and/or Industrial Operations	(15) 783	(865) 1,067	(14) 886	(3) 903	
Marketing - Consumer Products/Services	(333) 749	(404) 876	(1) 708	(4) 799	(3) 746
Marketing - Industrial Products/Services	(35) 814	(400) 943		(1) 632	
Mathematics/Statistics	(90) 891	(93) 947	(17) 854	(5) 800	(2) 601
Personnel/Employee Relations	(20) 738	(53) 892	(13) 760	(18) 705	(19) 683
Research - Non-Scientific	(16) 763	(66) 918	(11) 867	(12) 739	(17) 677
Research - Scientific	(2) 613	(295) 996	(35) 839	(17) 794	(67) 720
Training & Development - Technical	(22) 785	(628) 1,083	(33) 898	(28) 859	(9) 793
Training & Development - Non-Technical	(537) 759	(253) 892	(38) 766	(19) 684	(24) 657

* Number in parenthesis is total offers reported. Blanks occur where no offers have been reported

SOURCE: The College Placement Council, A Study of 1974-75 Beginning Offers, Final Report, July 1975

TABLE 5 - NUMBER AND AVERAGE MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES IN NON-TECHNICAL CURRICULA BY TYPE OF EMPLOYER AND SEX, 1974-75

TYPE OF EMPLOYER	No. Offers 1974-75 Total			Average $ Offers		
	Total	Men	Women	Overall	Men	Women
Business	5,491	4,164	1,327	$901	$915	$857
Federal Government	328	231	97	812	826	779
State & Local Government	381	242	139	769	795	725
Manufacturing/Industrial	2,729	2,185	544	912	914	901
Non-Profit & Educational Orgns.	281	152	129	692	730	647

TABLE 6 - NUMBER AND AVERAGE MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES IN TECHNICAL CURRICULA BY TYPE OF EMPLOYER AND SEX, 1974-75

TYPE OF EMPLOYER	No. Offers 1974-75 Total			Average $ Offers		
	Total	Men	Women	Overall	Men	Women
Business	387	301	86	$ 860	$ 880	$ 788
Federal Government	1,064	1,025	39	951	954	866
State & Local Government	491	470	21	940	948	755
Manufacturing/Industrial	13,001	12,264	737	1,109	1,112	1,061
Non-Profit & Educational Orgns.	298	88	210	784	824	767

SOURCE: The College Placement Council, A Study of 1974-75 Beginning Offers, Final Report, July 1975

TABLE 7 - NUMBER AND AVERAGE MONTHLY STARTING SALARY OFFERS TO MASTER'S DEGREE CANDIDATES BY CURRICULUM, 1973-74 AND 1974-75

CURRICULUM	No. Offers 1974-75 Total	AVERAGE $ OFFERS		1974-75 Total change from 1973-74 Total (=100)
		1974-75 Total	1973-74 Total	
ENGINEERING				
Chemical	507	$1,310	$1,172	111.8
Civil	311	1,183	1,102	107.4
Electrical	660	1,228	1,149	106.9
Industrial	166	1,234	1,120	110.2
Mechanical	466	1,274	1,138	112.0
SCIENCES				
Agriculture & Related Sciences	94	1,064	950	112.0
Chemistry	79	1,118	1,050	106.5
Computer	157	1,169	1,120	104.4
Mathematics	76	1,138	1,042	109.2
Metallurgy (inc. Metallurgical Engrg., Materials Engrg. & Sci. & Ceramics)	70	1,242	1,131	109.8
Physics	36	1,216	1,089	111.7
BUSINESS, ADMINISTRATION, INDUSTRIAL MANAGEMENT OR COMMERCE				
After Non-Technical Undergraduate Degree	3,502	1,250	1,181	105.8
After Technical Undergraduate Degree	1,055	1,324	1,235	107.2
HUMANITIES AND SOCIAL SCIENCES				
Humanities	71	931	855	108.9
Social Sciences	172	953	917	103.9

SOURCE: College Placement Council, A Study of 1974-75 Beginning Offers, Final Report, July 1975

TABLE 8 - NUMBER AND AVERAGE MONTHLY STARTING SALARY OFFERS TO MASTER'S DEGREE CANDIDATES BY GRADUATE PROGRAM AND TYPE OF EMPLOYER, 1974-75

TYPE OF EMPLOYER	TYPE OF GRADUATE PROGRAM						
	MBA-Non-Technical Degree	MBA Technical Degree	Chemical Engineering	Civil Engineering	Electrical Engineering	Industrial Engineering	Mechanical Engineering
Accounting - Public	(1,445) $1,219	(268) $1,249	$	$	(3) $1,236	(4) $1,192	$
Banking, Finance, Ins.	(667) 1,303	(91) 1,349			(1) 875	(2) 1,354	(1) 1,175
Merchandising (Retail & Wholesale) & Services	(160) 1,173	(27) 1,204			(1) 1,208	(2) 1,229	
Aerospace, Electronics Instruments	(117) 1,258	(83) 1,287		(9) 1,169	(299) 1,234	(18) 1,216	(90) 1,247
Automotive & Mechanical Equipment	(50) 1,289	(34) 1,361	(4) 1,251	(1) 1,185	(11) 1,243	(10) 1,321	(36) 1,257
Building Materials Manufacturies & Construction	(26) 1,155	(23) 1,284	(18) 1,302	(62) 1,184	(15) 1,190	(5) 1,224	(25) 1,249
Chemicals, Drugs & Allied Products	(226) 1,306	(159) 1,372	(199) 1,294	(23) 1,282	(37) 1,267	(34) 1,260	(78) 1,315
Electrical Machinery & Equipment	(112) 1,296	(68) 1,383	(4) 1,316	(3) 1,120	(103) 1,222	(8) 1,203	(65) 1,272
Food & Beverage Processing	(107) 1,251	(26) 1,343	(6) 1,254		(2) 1,250	(5) 1,217	(2) 1,257
Glass, Paper, Packing & Allied Products	(88) 1,311	(44) 1,349	(14) 1,240	(3) 1,278	(3) 1,295	(11) 1,246	(13) 1,321
Metals & Metal Products	(60) 1,258	(38) 1,253	(10) 1,242	(23) 1,165	(12) 1,188	(20) 1,218	(15) 1,252
Petroleum & Allied Products (inc. Natural Gas)	(185) 1,324	(109) 1,428	(243) 1,338	(47) 1,273	(53) 1,334	(24) 1,288	(91) 1,339
Research and/or Consulting Organizations	(64) 1,446	(36) 1,496	(5) 1,270	(60) 1,176	(24) 1,185	(9) 1,186	(18) 1,223
Tire & Rubber	(8) 1,179	(2) 1,350				(1) 1,060	
Utilities - Public (inc. Transportation)	(60) 1,176	(28) 1,230	(1) 1,125	(9) 1,168	(58) 1,197	(6) 1,163	(11) 1,129
Government - Federal	(52) 1,020	(15) 1,268	(3) 1,055	(26) 1,082	(34) 1,092	(6) 1,042	(18) 1,106
Government - Local & State	(26) 1,055	(1) 1,006		(25) 1,066		(1) 1,150	(2) 1,184
Nonprofit Organizations & Educational Institutions	(39) 1,056	(3) 1,158			(4) 1,217		(1) 1,166

[12] SOURCE: The College Placement Council, *A Study of 1974-75 Beginning Offers, Final Report*, July 1975

TABLE 9 - NUMBER AND AVERAGE MONTHLY STARTING SALARY OFFERS TO DOCTORAL DEGREE CANDIDATES BY CURRICULUM, 1973-74 AND 1974-75

CURRICULUM	No. Offers 1974-75 Total	AVERAGE $ OFFERS		1974-75 Total change from 1973-74 Total (=100)
		1974-75 Total	1973-74 Total	
ENGINEERING				
Chemical	142	$1,645	$1,550	106.1
Civil	8	1,382	1,426	96.9
Electrical	72	1,550	1,551	99.9
Mechanical	73	1,624	1,479	109.8
SCIENCES				
Chemistry	162	1,503	1,411	106.5
Mathematics (inc. Operations, Research, Statistics & Actuarial Science)	17	1,523	1,341	113.6
Metallurgy (inc. Metallurgical Engrg., Materials Engrg. & Sci. & Ceramics)	20	1,557	1,452	107.2
Physics	62	1,473	1,409	104.5

SOURCE: Trends in Employment of College and University Graduates in Business and Industry, 1975, Twenty-Ninth Annual Report, and Trends ..., 1974, Twenty-Eighth Annual Report, by Frank S. Endicott

TABLE 10 - NUMBER AND AVERAGE STARTING MONTHLY SALARIES FOR NEW MALE GRADUATES BY FIELD AND DEGREE, 1974 AND 1975

FIELD	BACHELOR'S DEGREE				MASTER'S DEGREE			
	# to be hired	1975	1974	Percent Increase	# to be hired	1975	1974	Percent Increase
Engineering (84)	3,777	$1,062	$995	6.7	423	$1,223	$1,144	9.8
Accounting (83)	2,843	990	956	3.6	817	1,256	1,221	2.8
Sales-Marketing (59)	1,483	862	840	2.6				
Business Adm. (72)	1,454	814	777	4.8				
Liberal Arts (39)	654	776	745	4.2				
Production Mgt. (24)	100	928	886	4.7				
Chemistry (22)	111	992	930	6.7				
Math.-Statistics (43)	300	915	870	5.2				
Economics-Finance (35)	165	851	842	1.1	131*	1,155	1,092	5.8
Other Fields (33)	299	872	864	0.9				
MBA with Technical BS					155	1,267	1,225	3.4
MBA with Non-Technical BA					400	1,237	1,190	3.9

*Other fields.

NOTE: Number of hiring Companies for 1975 at bachelor's level in parenthesis.

TABLE 11 - NUMBER AND AVERAGE STARTING MONTHLY SALARIES FOR NEW WOMEN GRADUATES BY FIELD, 1974 AND 1975

FIELD	1975			1974			Percent Increase
	Number of Hiring Companies	Number To Be Hired	Salary	Number of Hiring Companies	Number To Be Hired	Salary	
Data Processing*	33	217	$ 885	44	231	$ 838	5.6
Math/Statistics	13	72	918				
General Business	58	627	840	48	580	775	8.4
Accounting	35	475	986	50	353	868	13.6
Liberal Arts	23	266	784	23	328	752	4.3
Engineering	38	110	1,075	45	187	952	12.9
Marketing/Retailing	17	119	814	28	146	823	-1.1
Science (Field Not Stated)	14	55	950	24	74	878	8.2
Other Fields	13	57	825	38	146	795	3.8

*Includes Mathematics for 1974

SOURCE: Trends in Employment of College and University Graduates in Business and Industry, 1975, Twenty-Ninth Annual Report, by Frank S. Endicott

TABLE 12 - AVERAGE MONTHLY STARTING SALARIES OF NEW GRADUATES° BY FIELD AND SEX, 1975

FIELD	MEN	WOMEN
Engineering	$1,062	$1,075
Accounting	990	986
Sales-Marketing*	862	814
Business Administration**	814	840
Liberal Arts	776	784
Math-Statistics	915	918

* Defined as Marketing/Retailing for women

** Defined as General Business for women

° Includes only bachelor's degree males, but all women graduates at all degree levels

TABLE 13 - NUMBER AND 1974 MEDIAN MONTHLY SALARY OF MALE GRADUATES EMPLOYED FIVE YEARS AGO (CLASS OF 1969) AND EMPLOYED TEN YEARS AGO (CLASS OF 1964)

FIELD	Employed 5 Years Ago		Employed 10 Years Ago	
	Number	Salary	Number	Salary
Engineering	920	$1,362	590	$1,674
Accounting	928	1,322	282	1,718
Sales	310	1,290	190	1,760
General Business	2,263	1,271	1,108	1,645

SOURCE: CHEMICAL AND ENGINEERING NEWS, October 27, 1975

CHART 1 - OVERALL MEDIAN ANNUAL STARTING SALARIES FOR CHEMISTS BY DEGREE LEVEL, 1965-1975

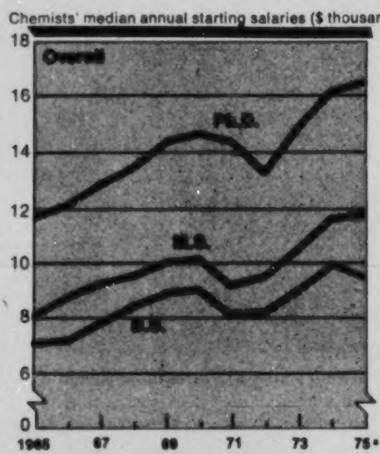


CHART 2 - MEDIAN ANNUAL STARTING SALARIES FOR CHEMISTS IN INDUSTRY BY DEGREE LEVEL, 1965-1975

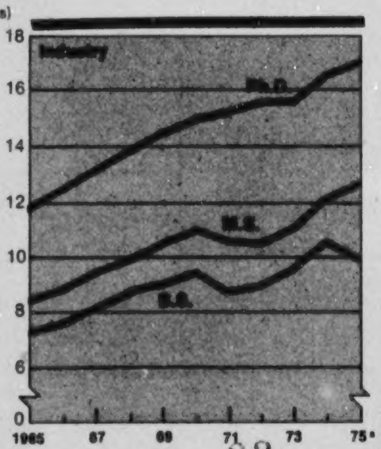
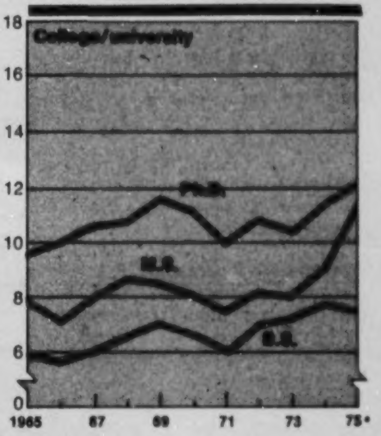


CHART 3 - MEDIAN ANNUAL STARTING SALARIES FOR CHEMISTS IN COLLEGES & UNIVERSITIES BY DEGREE LEVEL, 1965-'75



SOURCE: CHEMICAL AND ENGINEERING NEWS, October 27, 1975

TABLE 14 - MEDIAN ANNUAL SALARIES OF CHEMISTS AND CHEMICAL ENGINEERS BY DEGREE LEVEL, 1974 AND 1975

	1974	1975	PERCENT CHANGE
CHEMISTS			
Bachelor's Degree	$ 9,900	$ 9,500	-4%
Master's Degree	11,700	11,800	1
Doctorate Degree	16,200	16,600	2
CHEMICAL ENGINEERS			
Bachelor's Degree	12,600	14,200	13
Master's Degree	14,000	14,900	6
Doctorate Degree	17,600	20,400	16

TABLE 15 - MEDIAN ANNUAL SALARIES OF BACHELOR'S DEGREE CHEMISTS AND CHEMICAL ENGINEERS BY TYPE OF EMPLOYER, 1975

TYPE OF EMPLOYER	CHEMISTS	CHEMICAL ENGINEERS
Manufacturing Industries	$10,500	$14,400
Non-Manufacturing Industries	9,000	14,100
State and Local Government	9,600	*
High Schools	8,500	*
Hospital & Independent Labs.	8,000	*
Colleges and Universities	7,500	*

* Data not available

TABLE 16 - MEDIAN STARTING SALARIES OF BACHELOR'S DEGREE CHEMISTS AND CHEMICAL ENGINEERS BY GEOGRAPHIC REGION, 1975

GEOGRAPHIC REGION	B. S. CHEMISTS	B. S. CHEMICAL ENGINEERS
Pacific	$ 9,600	$13,800
Mountain	*	*
West North Central	9,600	14,000
East North Central	10,500	14,000
West South Central	8,400	14,700
East South Central	*	14,400
South Atlantic	8,500	14,400
Middle Atlantic	10,100	14,100
New England	8,300	*

*Insufficient Data

SOURCE: American Chemical Society, 1974 Survey Report - Starting Salaries and Employment Status of Chemistry and Chemical Engineering Graduates, April 1975

TABLE 17 - NUMBER AND MEDIAN STARTING SALARIES OF CHEMISTS AND CHEMICAL ENGINEERS BY DEGREE LEVEL AND TYPE OF EMPLOYER, 1974

TYPE OF EMPLOYER	CHEMISTS			CHEMICAL ENGINEERS		
	B. S.	M. S.	PH.D.	B. S.	M. S.	PH.D.
Industry	(318) $10,500	(67) $12,100	(115) $16,500	(437) $12,700	(73) $14,000	(41) $17,600
Government, Federal	(14) 9,100	(1) 8,055*	(6) 16,700	(13) 11,300	(1) 13,440	
Government, State & Local	(22) 9,300	(2) 9,060*	(2) 13,750*	(4) 11,320*		
College/University	(37) 7,700	(5) 9,000	(31) 11,400			(1) 17,500
High School	(20) 8,100	(5) 10,800	(1) 8,800*			
Hospital/Independent Lab.	(32) 8,500	(4) 9,825*	(3) 12,833*		(1) 13,800*	
Nonprofit Organization	(10) 8,600	(3) 11,033*		(2) 13,400*		
Other	(9) 8,300	(3) 10,333*	(1) 17,520*	(10) 12,000		(1) 12,000
All Employers	(462) 9,900	(90) 11,800	(159) 16,200	(466) 12,600	(75) 14,000	(43) 17,600

* Mean

TABLE 18 - NUMBER, MEDIAN AND MEAN STARTING SALARIES OF CHEMISTS AND CHEMICAL ENGINEERS BY DEGREE AND GEOGRAPHIC REGION, 1974

GEOGRAPHIC REGION	B.S. CHEMISTS			PH.D. CHEMISTS			B.S. CHEMICAL ENGINEERS		
	No.	Median	Mean	No.	Median	Mean	No.	Median	Mean
Pacific	33	$ 9,500	$9,261	13	$16,660	$15,691	58	$12,600	$12,617
Mountain	19	9,700	9,598	5	15,400	14,837	8	12,700	12,670
West North Central	31	9,100	9,070	10	16,400	16,560	24	12,500	12,167
East North Central	103	10,500	9,938	29	16,100	15,092	70	12,800	12,844
West South Central	37	10,700	10,109	9	16,600	16,426	85	12,800	12,915
East South Central	14	9,700	9,859	8	11,800	12,538	13	12,700	12,624
South Atlantic	70	9,200	9,373	37	16,200	15,685	67	12,600	12,650
Middle Atlantic	106	10,400	10,154	41	16,400	16,180	110	12,600	12,564
New England	49	8,600	9,002	7	15,800	15,143	30	12,500	12,361
All Regions	462	9,900	9,690	159	16,200	15,593	465	12,600	12,660

SOURCE: CHEMICAL AND ENGINEERING NEWS, American Chemical Society, November 5, 1962; October 28, 1963; November 9, 1964; October 18, 1965; October 23, 1967; October 21, 1968; November 23, 1970; October 2, 1972; 1973 and 1974 Survey Reports, Starting Salaries and Employment Status of Chemistry and Chemical Engineering Graduates.

TABLE 19 - MEDIAN MONTHLY STARTING SALARIES FOR MEN AND WOMEN CHEMISTS, BACHELOR'S LEVEL, 1961-1974

Year	Men	Women	% Below Men
1961	$500	$433	13.4
1962	525	450	14.2
1963	550	473	14.0
1964	560	480	14.2
1965	590	499	15.4
1966	625	550	12.0
1967	660	600	10.0
1968	712	625	12.8
1969	750	702	6.9
1970	758	644	17.7
1971	691	650	5.9
1972	708	650	8.2
1973	750	708	5.9
1974	816	833	2.1

SOURCE: American Chemical Society, Professionals in Chemistry 1974, page 82

TABLE 20 - NUMBER, MEDIAN OR MEAN STARTING SALARIES OF CHEMISTS BY DEGREE, TYPE OF EMPLOYER AND SEX, 1974

TYPE OF EMPLOYER	MEN			WOMEN		
	B. S.	M. S.	Ph. D.	B. S.	M. S.	Ph. D.
Industry	(230) $10,400	(55) $12,300	(108) $16,500	(88) $10,800	(12) $11,900	(7) $16,400
Government, Federal	(11) 9,400	(1) 8,055*	(6) 16,700	(3) 8,000*	- -	- -
Government, State & Local	(19) 9,200	(2) 9,060*	(2) 13,750*	(3) 11,231*	- -	- -
College/University	(23) 7,600	(3) 9,333*	(23) 11,500	(14) 7,800	(2) 8,580*	(8) 11,100
High School	(14) 7,700	(5) 10,800	(1) 8,800*	(6) 8,300	- -	- -
Hospital/Independent Lab.	(20) 8,600	(1) 11,000*	(3) 12,833*	(12) 8,500	(3) 9,433*	- -
Non Profit Organization	(4) 8,725*	(2) 12,350*	- -	(6) 8,100	(1) 8,400*	- -
Other	(5) 10,100	(2) 11,250*	(1) 17,520*	(4) 7,965*	(1) 8,500*	- -
Total	(326) 9,800	(71) 12,000	(144) 16,300	(136) 10,000	(19) 11,300	(15) 13,000

* Mean

18 SOURCE: American Chemical Society, 1974 Survey Report - Starting Salaries and Employment Status of Chemistry and Chemical Engineering Graduates, April 1975

TABLE 21 - NUMBER, MEDIAN, AND MEAN ANNUAL STARTING SALARIES OF GRADUATE CHEMISTS BY CHEMICAL SPECIALTY, 1974

CHEMICAL SPECIALTY	M. S.			PH.D.		
	No.	Median	Mean	No.	Median	Mean
Analytical	13	$12,000	$11,845	22	$15,800	$14,824
Biochemistry	7	10,000	10,843	3	-	12,653
Inorganic	16	11,000	11,066	19	16,500	16,311
Organic	34	11,900	11,323	63	16,500	15,821
Physical	10	11,600	11,294	38	16,300	15,614
Polymer	3	-	12,833	4	-	16,825
Other	4	-	13,563	10	15,500	14,798
All Specialties	87	11,800	11,536	159	16,200	15,593

SOURCE: American Geological Institute, as reported in SET MANPOWER COMMENTS, Volume 11, No. 9, page 30

TABLE 22 - MEDIAN STARTING SALARIES FOR GEOSCIENCE GRADUATES BY DEGREE LEVEL, 1969-74

Degree Level	YEAR					
	1969	1970	1971	1972	1973	1974
Bachelors	$ 8,400	$ 8,650	$ 8,500	$ 9,000	$ 8,700	$ 9,700
Masters	10,000	10,500	10,200	11,100	11,000	12,000
Doctors	12,000	12,000	12,000	13,000	13,000	13,500

TABLE 23 - MEDIAN STARTING SALARIES OF GEOSCIENCE GRADUATES BY DEGREE LEVEL AND TYPE OF EMPLOYER, 1973 AND 1974

TYPE OF EMPLOYER	BACHELOR'S		MASTERS		DOCTORS	
	1973	1974	1973	1974	1973	1974
Industry	$9.600	$10,500	$12,000	$12,200	$14,400	$16,000
Government	9,000	9,000	10,800	12,000	13,000	14,700
Schools	7,500	8,000	9,400	10,000	12,000	12,500
ALL EMPLOYERS	8,700	9,700	11,000	12,000	13,000	13,500

SOURCE: American Institute of Physics, Summary Report, Survey of Bachelor's Degree Recipients 1973-74, Publication No. R-211.6, February 1975

TABLE 24 - DISTRIBUTION AND MEDIAN MONTHLY STARTING SALARIES OF PHYSICS BACHELOR'S DEGREE RECIPIENTS BY TYPE OF EMPLOYER AND SEX, 1973-74

TYPE OF EMPLOYER	MEN (509 reported salaries)		WOMEN (69 reported salaries)		TOTAL (578 reported salaries)	
	Distribution by Employer	Median	Distribution by Employer	Median	Distribution by Employer	Median
Industry - Mfg.	32%	$935	26%	$922	32%	$930
Industry - Service	22	895	24	825	22	890
High School	10	655	14	*	10	665
College or University	4	690	3	*	4	710
Government	20	830	21	855	20	835
Research Institute	5	860	4	*	5	865
Other	7	670	6	*	7	650
TOTAL	100	860	100	850	100	860

*Too few respondents to compute salary.

SOURCE: American Institute of Physics, 1973-74 Graduate Student Survey, AIP Pub. No. R-207.7, July 1975

TABLE 25 - MEDIAN MONTHLY STARTING SALARIES OF PHYSICISTS GRANTED GRADUATE DEGREES DURING THE ACADEMIC YEAR JULY 1, 1973 - JUNE 30, 1974

EMPLOYER	TERMINAL MASTER'S RECIPIENTS		DOCTORATE RECIPIENTS		
	Percentage Accepting Positions	Salary	Percentage Accepting Positions	Postdoctoral Fellowships	Salary
4-Year College	2%	$ *	% 5%	*	$ 965
University	9	790	36 16	885	1,040
Secondary School	19	775			
Industry	38	1,070	17		1,485
Government	23	1,045	3 8	1,050	1,195
Nonprofit Organization			1		
Federally-funded Research Center	3	*	5 5	1,080	1,320
Other	6	*	4		*
All Employers	100	1,025	100	910	1,215°

*Fewer than 20 graduates reported salaries.

°Does not include salaries of "postdocs."

Note: Where two salaries are shown for one employer, two corresponding percentages are given for doctorate recipients who accepted postdoctoral fellowships or other positions.

SOURCE: American Mathematical Society, NOTICES, Vol. 22, No. 6, Issue No. 164, October 1975

TABLE 26 - MEDIAN BEGINNING SALARIES IN MATHEMATICS FOR PH.D.'S BY TYPE OF EMPLOYER AND SEX, 1974 AND 1975

TYPE OF EMPLOYER	MEN		WOMEN	
	1974	1975	1974	1975
Teaching or Teaching & Research (9 months)	$12,400	$13,000	$11,500	$12,600
Research (9 months)	8,100	-	7,000	-
Teaching or Teaching & Research* (12 months)	14,600	14,500	12,600	-
Research (12 months)	9,500	11,900	-	-
Business & Industry (12 months)	19,000	18,900	15,600	17,500
Government (12 months)	19,900	18,500	17,700	10,000

TABLE 27 - MEDIAN BEGINNING SALARIES IN MATHEMATICS FOR PH.D.'S BY TYPE OF EMPLOYER, 1971-1975

TYPE OF EMPLOYER	1971	1972	1973	1974	1975
Teaching* (9 months)	$11,000	$11,500	$11,600	-	-
Teaching & Research* (9 months)	11,000	11,500	11,700	-	-
Teaching or Teaching & Research* (9 months)				$12,100	$12,800
Research (9 months)	11,000	11,100	11,100	8,000	-
Teaching* (12 months)	12,800	12,400	12,700	–	-
Teaching & Research* (12 months)	13,700	12,500	15,900	–	-
Teaching or Teaching & Research* (12 months)				13,800	14,500
Research (12 months)	12,000	12,500	15,000	9,500	11,900
Business & Industry (12 months)	17,000	18,100	18,000	19,000	18,700
Government (12 months)	15,100	15,500	16,800	19,700	18,200

* Figures in the Teaching and the Teaching and Research categories compiled in 1974 are not comparable to those for prior years; the two categories were combined in 1974.

SOURCE: Battelle Columbus Laboratories, National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, November 1, 1974

TABLE 28 - NUMBER AND MEAN MONTHLY STARTING SALARIES OF NONSUPERVISORY EMPLOYEES BY FIELD OF DEGREE AND DEGREE LEVEL, 1974

Field of Degree	DEGREE LEVEL					
	Bachelor's		Master's		Doctorate	
	No.	Salary	No.	Salary	No.	Salary
Engineering	458	$997	83	$1,146	25	$1,515
Chemistry	88	869	5	1,025	17	1,336
Physics	18	847	3	1,108	5	1,455
Life Sciences	38	697	7	925	4	1,250
Math & Statistics	64	869	5	1,035	6	1,441
Social Sciences	8	793	9	1,086	4	1,212

TABLE 29 - NUMBER AND MEAN STARTING SALARIES OF NONSUPERVISORY ENGINEERING BACHELOR'S DEGREE EMPLOYEES BY WORKING-AS-OCCUPATION, 1974

Working-As-Occupation	Number	Salary
Aeronautical Engineering	35	$ 965
Chemical Engineering	23	1,082
Electrical Engineering	257	995
Materials Engineering	1	1,025
Mechanical Engineering	45	990
Metallurgical Engineering	6	950
Nuclear Engineering	31	1,023

SOURCE: U. S. Department of Labor, Occupational Outlook Handbook, 1974-75 Edition

TABLE 30 - STARTING SALARIES OF SCIENTISTS BY FIELD, TYPE OF EMPLOYER, AND HIGHEST DEGREE ATTAINED, 1973

FIELD	Estimated Number Employed in 1972	TYPE OF EMPLOYER					
		Private Industry			Federal Government		
		B. S.	M. S.	Ph. D.	B. S.	M. S.	Ph. D.
Engineers	1,000,000	$10,700	$12,300	$16,400	$7,694 9,520	$ 9,520 11,614	$13,996 16,682
Mathematicians	76,000	9,500	11,000	16,000	7,694 9,520	11,614 13,996	13,996 16,682
Statisticians	23,000	9,300	11,000		7,649 9,520	11,614 13,996	13,996 16,682
Life Scientists	180,000	8,500			7,694 9,520	9,520 11,614	13,996 16,682
Biochemists	12,500	8,800	10,800	12,500			
Foresters	22,000				7,694 9,520	9,520 11,614	13,996 16,682
Geologists	23,000	9,000	11,000	13,000	7,694 9,520	9,520 11,614	13,996 16,682
Geophysicists	8,000	9,000	11,000	13,000	7,694 9,520	9,520 11,614	13,996 16,682
Meteorologists	5,000				7,619 9,520	11,614 13,996	13,996 16,682
Chemists	134,000	9,000	10,300	15,600	7,694 9,520	9,520 11,614	13,996 16,682
Physicists	49,000	9,900	11,800	16,000	7,694 9,520	9,520 11,614	13,996 16,682
Astronomers	2,000	8,700	11,000	12,000	7,619 9,520	11,614 13,996	13,996 16,682
Oceanographers	4,500	9,000	11,000	13,000	7,619 9,520	11,614 13,996	13,996 16,682
Psychologists	57,000		11,000	13,000			14,000
Anthropologists	3,700			12,000		11,614	13,996
Economists	36,000			12,000	7,694 9,520	11,614	
Political Scientists	10,000		9,000	10,500	7,694 9,520		
Sociologists	15,000					11,614	
Programmers	186,000	8,500*			7,000 - 9,500*		

* All Degrees Combined

SOURCE: "The Mechanical Engineer: An In-Depth Profile - Does Engineering Pay?", by John D. Alden, MECHANICAL ENGINEERING, March 1975

TABLE 31 - AVERAGE MONTHLY STARTING SALARIES FOR MECHANICAL ENGINEERING GRADUATES BY DEGREE LEVEL, 1961-1974

YEAR	DEGREE LEVEL		
	BACHELOR'S	MASTER'S	DOCTORATE'S
1961	$ 542	$ -	$ -
1962	564	692	-
1963	592	722	-
1964	614	743	1,017
1965	635	765	1,116
1966	670	799	1,136
1967	720	852	1,212
1968	768	906	1,282
1969	820	954	1,309
1970	867	1,008	1,370
1971	881	1,019	1,278
1972	894	1,030	1,381
1973	922	1,069	1,418
1974	1,001	1,138	1,479

24 SOURCE: Engineering Manpower Commission, "Advance Report for Survey Respondents," October 1975

TABLE 32 - NUMBER AND MEAN MONTHLY STARTING SALARIES OF BACHELOR'S DEGREE TECHNOLOGY GRADUATES BY CURRICULUM, 1975

CURRICULUM	No. of Schools	No. of Salaries	Mean Non-ECPD Schools*	Mean ECPD Schools*	Overall Mean
Aerospace	7	52	$ 956	$ 888	$933
Civil	20	264	1,000	909	914
Computer	4	68	[illegible]33	852	849
Electrical	18	199	925	990	983
Electronic	6	179	1,042	964	968
Engineering Technology	8	141	899	1,006	970
Industrial Technology	16	212	975	965	972
Mechanical	21	197	990	972	972
Other	6	42	859	1,088	919
All Curricula	37	1,354	943	955	952

TABLE 33 - NUMBER AND MEAN MONTHLY STARTING SALARIES OF ASSOCIATE DEGREE TECHNOLOGY GRADUATES BY CURRICULUM, 1975

CURRICULUM	No. of Schools	No. of Salaries	Mean Non-ECPD Schools*	Mean ECPD Schools*	Overall Mean
Aerospace	10	31	-	$756	$756
Air Conditioning	7	130	$694	724	701
Architectural	17	78	749	614	634
Automotive	8	162	658	706	668
Chemical	7	31	787	780	781
Civil	32	279	695	753	749
Computer	23	202	634	703	685
Construction	7	84	752	862	821
Drafting	21	150	718	703	715
Electrical	33	357	734	761	743
Electronics	34	544	783	762	776
Electromechanical	7	29	753	766	755
Environmental	2	25	-	698	698
Industrial	17	115	691	739	710
Mechanical	33	174	747	781	774
Other	23	97	718	809	741
All Curricula	77	2,488	727	747	738
Certificate Programs	15	348	-	-	689

*ECPD schools are those having at least one engineering technology curriculum accredited by the Engineers Council for Professional Development (ECPD). Specific curricula for these schools may or may not be accredited.

SALARIES OF EXPERIENCED SCIENTIFIC AND TECHNICAL PERSONNEL

● The *Manpower Characteristics System* of the *National Science Foundation* consists of information compiled through a number of sources, including the National Academy of Sciences-National Research Council's Doctorate Records File, and a longitudinal file of data on a sample population of doctorate recipients from U.S. institutions; the NSF's National Register of Scientific and Technical Personnel, which from 1954 through 1970 collected biennial information on scientists; and information assembled by the National Science Foundation from college and university sources. Tables 34 through 39 present data from the Manpower Characteristics System.

Table 34 presents data on median annual salaries of doctoral scientists and engineers by field and type of employer for 1973. Chemists working for the federal government and physicists and astronomers working in business and industry had the highest median annual salaries among physical scientists in 1973 - $23,800. However, economists working in business and industry had the highest median annual salary of all disciplines studied - $30,700.

Table 35 shows the same data for women doctoral scientists and engineers by type of employer. Women doctorates earn considerably less than their male counterparts in all disciplines.

By primary work activity, physicists and astronomers working in the management or administration of R % D earn the highest median annual salaries of the physical scientists (Table 36). Again, economists received the highest annual salaries of all disciplines studied, averaging $30,000 in the other segments of the management or administration of R & D. Table 37 shows the same breakdowns for women doctoral scientists and engineers by field and primary work activity.

By age, medical scientists age 65-69 had the highest median annual salary - $30,900, followed by statisticians age 55-59 at $30,100 (Table 38).

By race and sex, (Table 29), white women engineers commanded the highest annual salaries - $19,900 folllowed by white women statisticians at $19,800. Of the other races studied, black biological scientists earned the highest salaries - $18,800.

● The salaries of scientists and engineers in January 1974 as compiled by the *Census Bureau* are shown in Table 40. Except for life scientists, whose median salary was $17,596, basic annual median salaries of employed members were over $18,000. Engineers, mathematical specialists, physical scientists, environmental scientists and social scientists had median salaries above $19,000, with environmental scientists reporting the highest median salary of $19,927.

Table 41 shows median salary of scientists and engineers by field and type of employment. Operations research analysts working in nonprofit organizations had the highest median salaries among the groups studied, followed by operations research analysts and social scientists working for the federal government.

Table 42 points out once again the salary differential between men and women scientists and engineers. Male physical scientists had median annual salaries of $16,800 compared with $11,600 for women physical scientists.

● The *1974 NATIONAL SURVEY OF COMPENSATION PAID SCIENTISTS AND ENGINEERS ENGAGED IN RESEARCH AND DEVELOPMENT ACTIVITIES*, conducted by the *Columbus Laboratories of the Battelle Memorial Institute*, presents salary data from 329 establishments covering 88,412 scientists and engineers as of August 1974.

For bachelor's degree nonsupervisory scientists and engineers, by working-as-occupation, aeronautical and astronautical engineers had the highest mean monthly salaries, $1,659, followed by physicists at $1,627, (Table 43). For master's degree nonsupervisory scientists and engineers, physicists earnest the highest mean monthly salaries $1,750, followed by aeronautical and astronautical engineers at $1,737, (Table 44). For doctoral scientists and engineers, economists at $2,042 earned the highest monthly mean salary, followed by electrical and electronic engineers at $1,984 (Table 45).

By type of establishment, bachelor's degree nonsupervisory scientists and engineers earned most in federal establishments; master's degree scientists and engineers earned most in contract research centers; and doctoral degree scientists and engineers working in industry earned the highest salaries (Table 46).

By highest degree held, physicists earned the highest salaries at all three degree levels (Table 47).

Table 48 again shows the salary differentials between men and women with comparable education and work activities.

• Salary increases for R & D scientists in 1975 were numerous and of adequate dimensions according to the annual survey of the research and development industry by *INDUSTRIAL RESEARCH.*

The typical R & D scientist in 1975 is 42.8 years old, has 17.9 years of formal education, has worked for his present employer 9.3 years, and has 14.4 years of experience. His annual salary, which is nearly $20,000 after an 8% increase last year, is closely related to his education and work experience.

Chart 4 shows the longevity of respondents with the present employer. In the 1975 survey, three new and longer categories of "time with present employer" were added. Even then, an astounding 16% of the 5,280 respondents checked "more than 18 years."

It was a great year for metallurgists in R & D - their salaries increased by more than $6,000 (a gain of nearly a third) over 1974. Thus, for the first time in five years, aeronautical engineers lost their first-place position in the salary rankings by profession, and now rank second with an average salary increase of $2,000 over 1974 (Chart 5).

The premium paid for education increased substantially for Ph.D.'s. The average income for R & D workers with less than a bachelor's degree increased $70 from 1974; B.S. incomes went up an average of $1,200; M.S., $1,600; and Ph.D.'s, $3,300. The spread in salary by educational level has grown in the past three years, with the possessor of an M.S. degree averaging $1,558 more in 1975 than a B.S. person; and the Ph.D. getting $3,363 more than the M.S. person in 1975 (Chart 6).

Chart 7 shows that the majority of the R & D scientists and engineers in 1975 were making between $16,000 and $21,000.

In past years, salaries have moved upward in nearly uniform steps from inexperienced to most-experienced worker. However, in 1974, a sudden change occurred with those workers having more than five years of experience earning some $4,200 more. In both 1974 and 1975, the premium for 20 years' experience was close to $8,000 above starting salaries (Chart 8).

• The mean 1973 salary for women Ph.D.'s in the biosciences was less than 75% of the mean salary for men Ph.D.'s - $14,700 as compared with $19,900 according to an analysis of sex differentials among Ph.D. bioscientists by the *Manpower Analysis Branch of the National Institutes of Health* (Table 49).

The majority of the Ph.D.'s awarded to women have been in recent years. Fifty-four percent of bioscience Ph.D.'s awarded to women were earned after 1966, while only 40% of men Ph.D.'s in the bioscience labor force earned their degrees in the same period. This has accounted for some of the large differential in salaries between the sexes in the earlier years as shown in Table 49. Women come closest to matching the salaries of men in the 1971-72 cohort, where the difference is $2,500.

- Surveys conducted in the summer and fall of 1974 by the *American Geological Institute* found massive salary differentials between men and women earth scientists. In the petroleum industry, women with bachelor's degrees were earning $11,000 less than men; those with master's $10,800 less; and those with Ph.D.'s $800 less. Among those in universities and colleges, the median salary for women Ph.D.'s is $3,800 below the median for men (Table 50).

- The annual *American Chemical Society* study of the salaries of experienced chemists and chemical engineers shows that the median annual salaries of B.S. chemists increased 8.6% from $17,500 in 1974 to $19,000 in 1975. For chemists with master's degrees, the salaries climbed 7.6% from $18,400 in 1974 to $19,800 in 1975; and for Ph.D.'s, they rose 6.0% from $21,700 to $23,000 (Table 56). The median annual salaries of experienced chemical engineers have likewise been increasing. B.S. chemical engineers' salaries grew 12.7% from $21,300 in 1974 to $24,000 in 1975; for master's degree chemical engineers, the rise was 11.6% - from $22,400 to $25,000; and for Ph.D. chemical engineers, median salaries increased 4.8% from $24,800 to $26,000 (Table 56).

The salaries of experienced chemists depend on a variety of factors, including their type of employer, work activity, chemical specialty and geographic area. Typically, experienced women chemists earn less than their male counterparts. In 1975, the median annual salaries of B.S. women chemists in industry was $14,800, compared to $20,000 for comparable men. Women who worked for the government earned median salaries of $16,700 compared to $19,800 for men (Table 51).

By work activity, Ph.D. chemists earned 1975 median annual salaries of $23,000 in R & D, $30,000 in management, $17,800 in teaching, and $24,000 in the marketing and production category. Again, large differentials in salary levels for men and women exist in all work activities (Table 52).

By chemical specialty, Ph.D. polymer chemists reported the highest salaries - $25,100, followed by biochemists at $22,800, organic and physical chemists at $22,000 and analytical chemists at $21,600, (Table 53).

B.S. chemists working in the South Atlantic region earned the highest salaries - $20,000, followed by those working the West South Central at $19,400, and the New England and Middle Atlantic areas at $19,000. M. S. chemists earned the most in the East North Central, the Middle Atlantic and the South Atlantic areas - $20,000. The Middle Atlantic area paid Ph.D. chemists the highest salaries - $24,500, (Table 54).

Table 55 presents a comparison of salaries paid all chemists with those paid industrial chemists. Overall, industrial chemists earn a little more - $19,400 to $19,000 at the B.S. level, $20,800 to $19,800 at the M.S. level, and $25,300 to $23,000 at the Ph.D. level.

Data indicate that the longer women chemists work, the further behind they fall in salary parity with men. Table 57 shows that women B.S. chemists with 2-4 years of experience earn only $800 less than their male counterparts, but those with 30-34 years of experience earn $5,500 less. This increase in the salary gap between men and women chemists the longer they work is also true at advanced degree levels.

Table 58 presents 1975 median salary and 1974 income of chemists by degree level and years of experience.

- Among electronic data processing occupations, average weekly earnings in February 1973 reached $306 for top level systems analysts as compared to $247.50 and $185.50 for top level programmers and computer operators respectively according to *A SALARY PROFILE OF THE ELECTRONIC DATA PROCESSING OCCUPATIONS* by *Donald J. Blackmore*. By geographic area, the west paid the highest salaries to all EDP occupations studied (Table 59).

- White collar pay rose a record 9% in the year ended March 31, 1975 according to the annual survey of salaries paid for selected white-collar occupations in private industry by the *U. S. Department of Labor*. Top increases went to chemists at 10%, accountants at 9.8%, and engineering technicians at 9% (Table 60). For comparison, Table 61 presents similar data for the 1973-74 period.

- Average annual salaries for selected positions in state and territorial public health laboratories by state in 1974 are shown in Table 62. Alaska leads all states in salaries paid to all positions studied.

1974 salaries range from $5,853 for lab aide I to $23,505 for lab directors. Medium level microbioloists averaged $13,573, medium level chemists, $13,828, while top level microbiologists reached $18,160 and top level chemists $19,659 (Table 63).

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1973, Detailed Statistical Tables, Appendix B, NSF 75-312-A

TABLE 34 - MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND TYPE OF EMPLOYER, 1973

FIELD	Total	Type of Employer											No Report
		Bus. & Ind.	Educational Insts.				Hosp./ Clinic	Non-profit Orgs.	Fed. Gov't.	State Gov't.	Other Gov't.	Other	
			Total	4-Year Coll.	2-Year Coll.	Elem./ Sec. School							
ALL FIELDS	20,900	23,400	19,300	19,300	18,400	19,100	19,600	22,200	23,700	19,200	19,600	24,700	21,600
Physical Sci.	21,200	23,000	18,700	18,800	17,200	13,400	18,900	21,700	23,500	16,500	-	21,400	20,000
Chemists	21,300	22,800	18,300	18,500	17,500	13,200	18,400	22,100	23,800	-	-	-	20,500
Phys. & Astron.	21,100	23,800	19,100	19,200	16,500	-	-	21,100	23,300	-	-	21,100	-
Mathematical Sci.	19,300	24,200	18,700	18,700	19,300	-	-	24,700	23,900	-	-	-	-
Mathematicians	19,100	24,000	18,600	18,600	19,300	-	-	25,300	23,800	-	-	-	-
Statisticians	20,800	25,300	19,800	19,800	-	-	-	-	-	-	-	-	-
Computer Spec.	22,100	22,700	21,700	21,800	-	-	-	-	-	-	-	-	-
Environmental Sci.	20,700	23,100	18,900	19,000	-	-	-	20,700	23,900	17,500	-	-	-
Earth Scientists	20,700	23,100	18,800	18,900	-	-	-	21,500	24,100	17,500	-	-	-
Oceanographers	19,400	-	18,900	18,800	-	-	-	-	23,000	-	-	-	-
Atmospheric Sci.	22,800	-	21,500	21,800	-	-	-	-	23,800	-	-	-	-
Engineers	22,500	23,500	20,900	20,900	19,300	-	-	22,800	23,500	16,700	-	21,100	21,900
Life Scientists	20,000	23,500	19,000	19,100	17,600	-	20,700	20,200	23,200	19,200	20,600	22,600	22,000
Biol. Scientists	19,500	23,100	18,800	18,800	17,100	-	19,700	19,100	22,900	18,500	-	22,200	19,800
Agri. Scientists	19,800	22,300	18,800	18,800	-	-	-	-	22,700	17,700	-	-	-
Medical Sci.	23,000	25,400	21,500	21,500	-	-	22,800	24,800	26,500	25,800	-	-	-
Psychologists	20,200	28,300	19,300	19,200	20,600	20,900	19,500	21,800	24,800	20,900	19,000	30,500	24,400
Social Scientists	20,400	28,000	19,600	19,600	22,300	-	-	24,300	27,300	21,800	25,100	26,800	20,600
Economists	22,300	30,700	20,900	20,900	-	-	-	27,200	26,800	-	-	-	-
Socio./Anthro.	19,500	-	19,400	19,300	-	-	-	19,800	-	-	-	-	-
Other Soc. Sci.	19,600	25,900	19,200	19,100	22,500	-	-	24,100	27,900	-	25,400		18,600
No Report	19.100	-	-	-	-	-	-	-	-	-	-		-

NOTE: All median salaries were computed only for full-time employed civilians. No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1973, Detailed Statistical Tables, Appendix B, NSF 75-312-A

TABLE 35 - MEDIAN ANNUAL SALARIES OF WOMEN DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND TYPE OF EMPLOYER, 1973

Field	Total	Bus. & Ind.	Type of Employer										
			Educational Institutions										
			Total	4-Year Col./Univ.	2-Year Colleges	Elem./Sec. Sch.	Hosp./Clinics	Non-profit Org.	Fed Gov't.	State Gov't.	Other Gov't.	Other	No Report
All Fields	17,600	19,700	17,100	17,100	17,000	18,400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Physical Scientists	17,400	20,900	16,200	16,100	17,400			[illegible]	[illegible]				
Chemists	17,300	20,800	16,000	15,800	17,800				[illegible]				
Physicists/Astron.	17,700	-	16,700	16,700					[illegible]				
Mathematical Sci.	17,100	17,100	17,000	-									
Mathematicians	16,800	-	16,900	16,800									
Statisticians	19,500	-	18,700	18,700									
Computer Spec.	17,700	-	19,200	19,200									
Environmental Sci.	17,000	-	16,400	16,500					[illegible]				
Earth Sci.	16,700	-	15,500	15,400									
Oceanographers	-	-	-										
Atmospheric Sci.	-	-	-	-									
Engineers	19,600	19,100	18,800	18,400									
Life Scientists	17,300	18,300	16,800	16,800	16,700		[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
Biological Sci.	17,100	17,700	16,700	16,700	16,600		[illegible]	[illegible]	[illegible]				
Agricultural Sci.	-	-	15,900	15,900			[illegible]	-	[illegible]				
Medical Sci.	18,300	-	17,400	17,400									
Psychologists	18,200	-	17,900	17,700	16,700	23,500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Social Scientists	17,600	-	17,200	17,200				[illegible]	[illegible]				
Economists	19,300	-	18,400	18,400									
Socio./Anthro.	17,100	-	16,900	16,900									
Other Soc. Sci.	17,400	-	17,100	17,000									
No Report	-	-	-										

NOTE: All median salaries were computed only for full-time employed civilians. No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1973, Detailed Statistical Tables, Appendix B, NSF 75-312-A

TABLE - 36 MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND PRIMARY WORK ACTIVITY, 1973

FIELD	Total	Research & Development				Mngt. or Admin.				Teach.	Consult.	Sales Prof. Serv.	No Report
		Total	Basic Res.	Appl'd. Res.	Devel- opment	Total	Of R&D	Other than R&D	Of Both				
ALL FIELDS	20,900	20,600	19,900	21,000	21,100	26,700	27,000	25,700	27,500	18,900	23,200	20,700	21,400
Physical Sci.	21,200	21,000	20,500	21,400	21,100	27,200	27,000	26,700	29,000	18,400	26,500	22,100	22,700
Chemists	21,300	21,000	20,800	21,100	20,900	26,800	26,400	26,700	29,500	18,000	-	22,000	22,700
Phys. & Astron.	21,100	21,100	20,000	22,100	21,400	28,200	28,700	26,500	27,900	19,000	-	-	22,500
Math. Sci.	19,300	21,400	19,700	23,200	19,800	27,300	29,100	26,100	28,100	18,300	-	-	20,200
Math.	19,100	21,500	19,600	23,300	-	27,700	30,300	27,400	-	18,100	-	-	19,900
Stat.	20,800	21,100	-	22,200	-	25,300	-	-	-	19,500	-	-	-
Computer Spec.	22,100	21,200	23,100	22,100	20,000	27,300	27,700	27,000	-	20,700	-	-	-
Envirnmt'l. Sci.	20,700	20,200	19,800	20,600	-	25,500	26,100	24,700	25,500	18,600	24,500	-	19,900
Earth Sci.	20,700	20,200	19,700	20,600	-	25,800	26,100	25,100	26,100	18,500	25,100	-	19,900
Oceanog.	19,400	18,800	18,600	-	-	22,600	22,100	-	-	18,300	-	-	-
Atmos. Sci.	22,800	21,800	21,900	-	-	27,900	-	-	-	21,500	-	-	-
Engineers	22,500	21,400	21,300	21,400	21,400	27,900	27,400	28,400	29,100	20,200	23,900	21,300	22,400
Life Sci.	20,000	19,300	19,200	19,400	19,300	26,600	27,100	25,100	26,500	18,700	19,400	22,200	20,900
Biol. Sci.	19,500	19,200	19,200	19,400	20,100	25,700	26,700	23,600	25,800	18,400	18,600	21,100	21,000
Agr. Sci.	19,800	19,000	19,500	18,900	-	26,400	26,500	26,100	26,600	18,700	19,900	17,800	19,100
Med. Sci.	23,000	20,400	19,500	21,900	20,400	28,200	28,500	27,300	28,400	21,200	-	26,900	23,900
Psychologists	20,200	20,600	19,900	21,300	21,300	23,800	25,100	23,200	24,000	18,800	22,200	20,100	20,700
Social Sci.	20,400	21,700	22,100	21,800	17,600	26,300	26,300	25,800	27,900	18,900	27,800	21,500	21,700
Economists	22,300	22,400	21,100	22,700	-	29,700	29,300	30,000	29,700	20,000	-	-	23,200
Socio/ Anthro.	19,500	21,000	24,000	18,200	-	23,500	22,800	23,100	27,000	18,700	-	-	21,500
Other Soc. Sci.	19,600	21,100	21,300	21,800	-	25,400	25,200	25,200	26,700	18,400	25.700	-	20,700
No Report	19,100	-	-	-	-	-		-	-	-	-	-	-

NOTE: All median salaires were computed only for full-time employed civilians. No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1973, Detailed Statistical Tables, Appendix B, NSF 75-312-A

TABLE 37 - MEDIAN ANNUAL SALARIES OF WOMEN DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND PRIMARY WORK ACTIVITY, 1973

Field	Total	Primary Work Activity											
		Research and Development				Management or Administration				Teaching	Consulting	Sales/ Prof. Services	No Report
		Total	Basic Research	Applied Research	Development	Total	of R & D	of other than R&D	of both				
All Fields	17,600	17,400	16,800	19,100	17,200	22,300	23,200	21,700	22,100	17,000	18,300	18,200	17,600
Physicial Scientists	17,400	18,600	17,900	19,300	-	22,900	23,600	22,100	-	16,200	-	-	16,300
Chemists	17,300	18,500	17,600	19,200	-	22,700	23,500	21,700	-	16,000	-	-	-
Phys. & Astronomers	17,700	19,000	18,300	-	-	-	-	-	-	16,600	-	-	-
Mathematical Scientists	17,100	18,500	-	-	-	-	-	-	-	16,700	-	-	-
Mathematicians	16,800	16,700	-	-	-	-	-	-	-	16,600	-	-	-
Statisticians	19,500	-	-	-	-	-	-	-	-	-	-	-	-
Computer Specialists	17,700	-	-	-	-	-	-	-	-	-	-	-	-
Environmental Scientists	17,000	16,800	16,500	-	-	-	-	-	-	17,100	-	-	-
Earth Scientists	16,700	15,900	15,100	-	-	-	-	-	-	17,100	-	-	-
Oceanographers	-	-	-	-	-	-	-	-	-	-	-	-	-
Atmospheric Scientists	-	-	-	-	-	-	-	-	-	-	-	-	-
Engineers	19,600	18,800	-	-	-	-	-	-	-	18,600	-	-	-
Life Scientists	17,300	16,700	16,300	18,400	-	23,300	23,200	23,500	-	17,200	-	14,800	17,100
Biological Scientists	17,100	16,700	16,300	19,100	-	24,900	24,900	-	-	17,100	-	-	16,600
Agricultural Scientists	-	-	-	-	-	-	-	-	-	-	-	-	-
Medical Scientists	18,300	16,900	16,900	17,000	-	22,100	20,900	23,500	-	18,900	-	-	18,600
Psychologists	18,200	18,800	18,500	20,200	-	21,100	23,700	21,000	19,400	17,200	18,700	18,600	17,900
Social Scientists	17,600	18,100	17,400	19,500	-	22,600	21,500	22,500	23,900	16,900	-	-	18,900
Economists	19,300	19,300	-	-	-	27,900	-	-	-	18,100	-	-	-
Socio./Anthropologists	17,100	17,700	-	-	-	-	-	-	-	16,500	-	-	-
Other Social Scientists	17,400	17,400	-	-	-	21,700	-	21,500	-	17,000	-	-	18,300
Other	-	-	-	-	-	-	-	-	-	-	-	-	-
No Report	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTE: All median salaries were computed only for full-time employed civilians. No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1973, Detailed Statistical Tables, Appendix B, NSF 75-312-A

TABLE 38 - MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND AGE, 1973

FIELD	Total	Age											
		24 & Under	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 & Over	No Report
ALL FIELDS	20,900	-	15,500	17,500	19,600	22,000	24,100	25,000	25,300	25,900	24,900	22,500	21,400
Physical Scientists	21,200	-	15,100	17,400	20,100	22,500	25,300	25,800	26,400	25,900	24,600	-	-
Chemists	21,300	-	15,200	17,500	20,300	22,300	24,600	25,300	26,100	24,600	23,700	-	-
Physicists & Astron.	21,100	-	15,000	17,200	19,900	22,900	26,300	26,400	27,600	27,800	29,200	-	-
Mathematical Sci.	19,300	-	14,200	16,900	18,800	22,000	24,900	25,200	27,100	25,400	26,300	-	-
Mathematicians	19,100	-	14,200	16,800	18,800	21,500	25,300	25,200	26,300	25,300	24,900	-	-
Statisticians	20,800	-	-	17,600	19,100	24,900	23,400	-	30,100	-	-	-	-
Computer Spec.	22,100	-	17,500	19,300	21,800	23,600	27,600	27,200	-	-	-	-	-
Environmental Sci.	20,700	-	14,400	17,100	19,500	21,200	23,500	26,200	27,300	27,100	28,100	-	-
Earth Scientists	20,700	-	14,600	17,300	19,400	21,000	23,500	24,800	27,400	26,100	28,300	-	-
Oceanographers	19,400	-	-	15,500	18,900	21,500	-	-	-	-	-	-	-
Atmospheric Sci.	22,800	-	-	18,600	-	-	-	-	-	-	-	-	-
Engineers	22,500	-	17,500	19,500	21,900	23,500	26,900	27,800	27,600	28,600	26,600	-	-
Life Scientists	20,000	-	14,600	16,400	18,500	21,100	22,900	23,900	24,600	25,300	25,000	26,300	-
Biological Sci.	19,500	-	14,600	16,100	18,100	20,400	22,700	23,800	24,300	24,500	24,300	-	-
Agricultural Sci.	19,800	-	14,500	16,700	18,300	19,900	21,000	22,800	23,700	24,900	23,800	-	-
Medical Sci.	23,000	-	14,400	17,100	21,600	24,600	26,000	26,500	28,400	29,500	30,800	-	-
Psychologists	20,200	-	15,200	17,300	18,900	21,900	23,400	23,700	23,800	24,500	22,500	-	-
Social Sci.	20,400	-	14,800	17,400	18,600	21,100	23,000	24,100	24,500	25,100	24,200	-	-
Economists	22,300	-	17,800	19,000	19,900	23,100	25,100	25,900	26,100	27,100	-	-	-
Socio./Anthro.	19,500	-	-	16,500	18,100	20,600	20,900	23,400	22,400	26,100	-	-	-
Other Soc. Sci.	19,600	-	13,700	16,600	18,000	20,400	23,000	23,700	24,200	23,700	25,300	-	-
No Report	19,100	-	-	-	-	-	-	-	-	-	-	-	-

NOTE: All median salaries were computed only for full-time employed civilians. No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1973, Detailed Statistical Tables, Appendix B, NSF 75-312-A

TABLE 39 - MEDIAN ANNUAL SALARIES OF WOMEN DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND RACE, 1973

Field	Race							
	Total	White/ Cauc.	Black/ Negro	Amer. Indian	Oriental	East Indian	Other	No Report
All Fields	17,600	17,600	18,900	-	16,400	16,500	-	18,400
Physical Scientists	17,400	17,400	-	-	15,800	-	-	18,800
Chemists	17,300	17,300	-	-	16,300	-	-	18,300
Phys./Astron.	17,700	17,700	-	-	-	-	-	-
Mathematical Sci.	17,100	17,000	-	-	-	-	-	17,500
Mathematicians	16,800	16,700	-	-	-	-	-	-
Statisticians	19,500	19,800	-	-	-	-	-	-
Computer Spec.	17,700	18,100	-	-	-	-	-	-
Environmental Sci.	17,000	16,900	-	-	-	-	-	-
Earth Scientists	16,700	16,500	-	-	-	-	-	-
Oceanographers	-	-	-	-	-	-	-	-
Atmospheric Sci.	-	-	-	-	-	-	-	-
Engineers	19,600	19,900	-	-	-	-	-	-
Life Scientists	17,300	17,300	18,800	-	16,000	-	-	18,000
Biological Sci.	17,100	17,100	18,800	-	16,000	-	-	17,700
Agricultural Sci.	-	16,900	-	-	-	-	-	-
Medical Sci.	18,300	18,300	-	-	-	-	-	-
Psychologists	18,200	18,100	-	-	-	-	-	18,600
Social Scientists	17,600	17,500	-	-	-	-	-	18,200
Economists	19,300	19,300	-	-	-	-	-	-
Socio./Anthro.	17,100	17,000	-	-	-	-	-	16,400
Other Soc Sci.	17,400	17,100	-	-	-	-	-	20,000
No Report	-	-	-	-	-	-	-	-

NOTE: All median salaries were computed only for full-time employed civilians. No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: Bureau of the Census, Selected Characteristics of Persons in Fields of Science or Engineering: 1974, Current Population Reports, Series P-23, No. 53, July 1975

TABLE 40 - PERCENT DISTRIBUTION OF 1974 BASIC ANNUAL SALARY OF SCIENTISTS OR ENGINEERS EMPLOYED IN 1970

BASIC ANNUAL SALARY	FIELD OF SCIENCE OR ENGINEERING IN 1974								Not in a field of science or engineering in 1974
	Computer specialists	Engineers	Mathematical specialists	Life scientists	Physical scientists	Environmental scientists	Psychologists	Social scientists	
TOTAL REPORTING BASIC ANNUAL SALARY									
Number	49,514	595,734	24,611	66,319	105,069	25,445	30,699	40,738	126,052
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less Than $8,000	1.1	1.3	4.3	4.5	3.9	3.1	5.9	3.1	4.9
$8,000 to $9,999	0.6	0.7	1.0	2.7	2.7	2.7	2.4	3.0	4.1
$10,000 to $14,999	18.1	14.2	17.0	24.7	16.9	13.9	16.2	14.9	22.2
$15,000 to $19,999	45.4	38.0	30.9	33.6	30.7	30.7	32.5	29.5	29.3
$20,000 to $24,999	24.3	27.2	25.6	19.1	23.4	26.8	21.5	21.2	18.8
$25,000 to $29,999	6.8	11.2	12.8	8.6	12.7	12.9	11.0	13.9	8.3
$30,000 to $39,999	3.0	5.7	7.0	5.1	8.0	7.9	8.4	10.3	7.5
$40,000 to $49,999	0.5	0.9	1.1	1.0	1.1	1.1	1.1	2.7	2.3
$50,000 or more	0.2	0.9	0.3	0.8	0.8	0.8	1.1	1.3	2.7
MEDIAN SALARY	$18,383	$19,391	$19,466	$17,596	$19,358	$19,927	$18,879	$19,883	$18,165

NOTE: Detail may not add to total because of rounding

SOURCE: National Science Foundation, Science Resources Studies Highlights, NSF 75-326, October 28, 1975

TABLE 41 - MEDIAN SALARY OF SCIENTISTS AND ENGINEERS BY FIELD AND TYPE OF EMPLOYMENT, 1972

FIELD	TYPE OF EMPLOYMENT						
	TOTAL	Private Industry	Federal Gov't.	State Gov't.	Local Gov't.	Nonprofit Organizations	Colleges/ Univ.
SCIENTISTS AND ENGINEERS	$16,600	$16,500	$19,000	$13,900	$15,100	$16,400	$16,500
SCIENTISTS	16,100	16,200	17,900	12,600	14,400	15,600	16,300
Mathematicians*	16,100	15,900	18,000	12,900	14,900	15,200	16,600
Computer Specialists	16,200	16,300	18,300	13,900	14,000	15,100	14,800
Operations Research Analysts	17,600	17,200	20,400	13,900	12,400	20,700	16,700
Life Scientists	14,700	13,500	15,400	12,100	13,500	11,400	16,000
Physical Scientists	16,400	16,400	18,300	12,900	13,600	17,100	15,800
Social Scientists°	16,300	17,300	20,400	12,500	14,900	16,000	17,100
ENGINEERS	16,900	16,600	19,900	15,400	15,800	17,800	17,400

* Excludes statisticians
° Includes psychologists

SOURCE: National Science Foundation, National Sample of Scientists and Engineers: Changes in Employment 1970-72 and 1972-74, NSF 75-309, May 19, 1975, page 7

TABLE 42 - MEDIAN ANNUAL SALARIES OF SCIENTISTS AND ENGINEERS BY FIELD AND SEX, 1972

FIELD	Total	Men	Women	Total with Ph.D.'s
Engineers	$16,900	$16,900	$12,100	$20,600
Mathematical specialists	16,100	16,700	13,300	18,700
Computer specialists	16,200	16,600	13,600	19,100
Operations research analysis	17,700	17,800	12,200	22,400
Physical scientists	16,400	16,800	11,600	19,500
Life scientists	14,700	15,200	11,200	18,500
Psychologists	16,300	17,400	14,400	19,100
Social scientists	16,200	17,200	12,100	19,800

SOURCE: Battelle Columbus Laboratories, National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, November 1, 1974.

TABLE 43 - NUMBER AND MEAN MONTHLY SALARIES OF BACHELOR'S DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1974

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	TOTAL*
Aeronautical and Astronautical Engineering	(114) $1,071	(85) $1,215	(138) $1,471	(108) $1,645	(159) $1,806	(161) $1,871	(122) $1,890	(195) $1,929	(51) $1,886	(3,022) $1,659
Chemical Engineering	(52) 1,067	(42) 1,228	(31) 1,263	(31) 1,458	(21) 1,567	(38) 1,610	(33) 1,693	(66) 1,713	(41) 1,890	(1,096) 1,511
Electrical and Electronic Engineering	(790) 1,114	(506) 1,251	(556) 1,407	(406) 1,564	(480) 1,696	(583) 1,758	(477) 1,884	(814) 1,895	(153) 2,032	(13,317) 1,557
Industrial Engineering	(23) 1,157	(17) 1,339	(25) 1,391	(17) 1,554	(22) 1,670	(22) 1,738	(27) 1,797	(54) 1,744	(11) 1,820	(606) 1,599
Materials Engineering	(23) 1,025	(15) 1,158	(15) 1,331	(14) 1,585	(14) 1,717	(13) 1,625	(17) 1,739	(33) 1,785	(13) 1,844	(439) 1,491
Mechanical Engineering	(118) 1,098	(97) 1,223	(97) 1,421	(72) 1,530	(88) 1,635	(97) 1,651	(135) 1,732	(198) 1,777	(58) 1,807	(2,697) 1,542
Metallurgical Engineering	(14) 1,071	(12) 1,245	(11) 1,293	(9) 1,475	(9) 1,597	(8) 1,662	(11) 1,697	(32) 1,654	(11) 1,711	(316) 1,503
Nuclear and Reactor Engineering	(96) 1,091	(54) 1,229	(53) 1,394	(42) 1,520	(24) 1,631	(34) 1,660	(38) 1,819	(59) 1,828	(14) 1,828	(1,106) 1,460
Total Engineering	(1,260) 1,102	(851) 1,239	(953) 1,409	(725) 1,563	(833) 1,704	(983) 1,751	(886) 1,840	(1,500) 1,860	(364) 1,926	(23,280) 1,561
Agricultural and Biological Sciences	(79) 797	(48) 957	(45) 1,091	(38) 1,177	(23) 1,364	(27) 1,397	(27) 1,473	(34) 1,410	(13) 1,378	(893) 1,130
Atmospheric, Earth, Marine & Space Sciences	(6) 808	(3) 941	(6) 1,091	(3) 1,308	(10) 1,535	(4) 1,837	(2) 1,600	(5) 1,435	(1) 1,475	(133) 1,264
Chemistry	(118) 927	(109) 1,038	(94) 1,213	(73) 1,247	(68) 1,375	(69) 1,457	(95) 1,526	(168) 1,588	(58) 1,662	(2,397) 1,306
Computer Sciences	(87) 1,018	(83) 1,139	(75) 1,366	(57) 1,427	(63) 1,659	(57) 1,558	(34) 1,657	(33) 1,867	(2) 1,850	(1,436) 1,368
Mathematics and Statistics	(66) 990	(42) 1,169	(101) 1,438	(57) 1,591	(44) 1,771	(42) 1,861	(27) 1,860	(27) 1,937	(9) 1,880	(1,112) 1,526
Physics	(37) 1,002	(36) 1,153	(47) 1,444	(28) 1,544	(43) 1,626	(53) 1,794	(47) 1,966	(64) 1,861	(16) 2,312	(1,014) 1,627
Psychology	(8) 818	(8) 768	(7) 1,153	(4) 1,387	(7) 1,603	(2) 1,775	(7) 1,596	(3) 1,725	- -	(121) 1,212
Economics	(11) 911	(10) 1,240	- -	(6) 1,600	(7) 1,567	(4) 1,962	(4) 1,787	(7) 1,857	(4) 1,725	(147) 1,476

* Total includes all years since first degree.

SOURCE: Battelle Columbus Laboratories, National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, November 1, 1974

TABLE 44 - NUMBER AND MEAN MONTHLY SALARIES OF MASTER'S DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1974

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	TOTAL*
Aeronautical and Astronautical Engineering	(8) $1,006	(32) $1,168	(52) $1,489	(61) $1,629	(77) $1,794	(60) $1,833	(57) $1,893	(56) $2,008	(12) $1,887	(1,128) $1,737
Chemical Engineering	(20) 1,197	(21) 1,246	(24) 1,422	(23) 1,553	(18) 1,647	(17) 1,777	(27) 1,832	(45) 1,811	(26) 1,994	(559) 1,651
Electrical and Electronic Engineering	(152) 1,194	(235) 1,292	(367) 1,480	(325) 1,640	(282) 1,780	(320) 1,863	(262) 2,017	(362) 2,054	(101) 2,101	(6,382) 1,725
Industrial Engineering	(3) 1,041	(7) 1,239	(7) 1,467	(10) 1,555	(10) 1,730	(9) 1,708	(6) 1,850	(24) 1,835	(10) 1,865	(250) 1,674
Materials Engineering	(2) 1,150	(4) 1,200	(10) 1,445	(9) 1,608	(16) 1,693	(6) 1,891	(9) 1,802	(11) 1,884	(6) 2,133	(209) 1,639
Mechanical Engineering	(30) 1,171	(57) 1,246	(53) 1,418	(48) 1,622	(36) 1,741	(42) 1,767	(50) 1,816	(49) 1,930	(20) 1,887	(1,012) 1,647
Metallurgical Engineering	(6) 1,108	(10) 1,270	(9) 1,430	(6) 1,466	(3) 1,458	(5) 1,875	(9) 1,897	(12) 1,891	(4) 1,775	(172) 1,616
Nuclear Engineering	(19) 1,196	(40) 1,232	(33) 1,462	(22) 1,513	(24) 1,702	(18) 1,750	(15) 1,898	(24) 1,912	(6) 1,850	(541) 1,579
Total Engineering	(258) 1,179	(426) 1,261	(571) 1,472	(525) 1,622	(481) 1,762	(495) 1,842	(451) 1,950	(605) 1,997	(196) 2,028	(10,698) 1,700
Agricultural and Biological Sciences	(23) 966	(24) 970	(36) 1,068	(27) 1,339	(21) 1,415	(12) 1,516	(21) 1,625	(44) 1,630	(7) 1,803	(555) 1,340
Atmospheric, Earth, Marine & Space Sciences	(2) 850	(4) 987	(3) 1,041	(8) 1,500	(5) 1,645	(4) 1,587	(6) 1,841	(4) 1,587	(2) 2,100	(122) 1,515
Chemistry	(8) 1,012	(32) 1,035	(38) 1,225	(32) 1,401	(31) 1,466	(25) 1,517	(67) 1,616	(89) 1,705	(28) 1,646	(925) 1,491
Economics	(5) 1,085	(11) 1,134	(11) 1,361	(8) 1,531	(9) 1,697	(9) 1,919	(11) 2,050	(12) 2,016	(10) 2,105	(230) 1,706
Computer Sciences	(24) 1,089	(23) 1,190	(42) 1,279	(36) 1,587	(24) 1,618	(22) 1,715	(17) 1,722	(16) 1,781	(2) 1,700	(581) 1,487
Mathematics and Statistics	(10) 1,075	(29) 1,183	(44) 1,402	(50) 1,604	(36) 1,779	(21) 1,955	(28) 1,864	(30) 2,090	(8) 2,206	(774) 1,682)
Physics	(4) 1,037	(21) 1,203	(45) 1,455	(39) 1,618	(27) 1,717	(36) 1,795	(47) 2,001	(51) 2,065	(20) 2,155	(760) 1,750
Psychology	(4) 900	(2) 1,150	(6) 1,225	(9) 1,597	(4) 1,825	(12) 1,762	(4) 1,600	(9) 1,502	(5) 1,950	(143) 1,537

SOURCE: Battelle Columbus Laboratories, National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, November 1, 1974

TABLE 45 - NUMBER AND MEAN MONTHLY SALARIES OF DOCTORATE DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1974

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE DEGREE									
	5	7	10	13	15	18	22	26-27	30-31	TOTAL*
Aeronautical and Astronautical Engineering	(1) $1,475	(5) $1,595	(18) $1,775	(24) $1,829	(10) $1,975	(11) $2,011	(3) $2,566	(3) $2,325	(2) $2,537	(227) $1,921
Chemical Engineering	(3) 1,591	(16) 1,656	(38) 1,828	(29) 1,871	(25) 2,001	(15) 2,063	(10) 2,272	(16) 2,314	(13) 2,196	(462) 1,954
Electrical and Electronic Engineering	(22) 1,534	(61) 1,659	(142) 1,841	(87) 1,939	(64) 2,042	(55) 2,189	(31) 2,214	(35) 2,369	(31) 2,521	(1,470) 1,984
Materials Engineering	(1) 1,575	(7) 1,510	(8) 1,706	(15) 1,798	(11) 2,002	(2) 2,075	(5) 1,865	(4) 2,131	(3) 2,025	(132) 1,783
Mechanical Engineering	(6) 1,458	(22) 1,615	(26) 1,738	(20) 1,902	(15) 1,855	(11) 2,075	(3) 2,616	(6) 2,475	(5) 2,175	(333) 1,839
Metallurgical Engineering	(4) 1,575	(4) 1,650	(13) 1,740	(5) 2,005	(7) 1,982	(7) 1,917	(2) 1,900	(1) 2,075	(6) 2,195	(152) 1,828
Nuclear Engineering	(1) 1,525	(12) 1,583	(13) 1,690	(12) 1,737	(6) 1,791	(9) 1,891	(2) 2,200	(4) 2,062	(2) 2,200	(171) 1,790
Total Engineering	(45) 1,517	(140) 1,636	(286) 1,805	(217) 1,886	(156) 1,971	(120) 2,106	(70) 2,187	(79) 2,258	(71) 2,359	(3,296) 1,926
Agricultural and Biological Sciences	(9) 1,458	(68) 1,318	(76) 1,436	(48) 1,468	(38) 1,738	(40) 1,871	(33) 1,843	(39) 2,199	(16) 2,467	(1,065) 1,711
Atmospheric Earth, Marine & Space Sciences	- -	(2) 1,550	(12) 1,537	(9) 1,808	(14) 1,725	(2) 1,625	(3) 1,791	(3) 2,041	(2) 2,200	(144) 1,735
Chemistry	(24) 1,210	(55) 1,406	(92) 1,674	(90) 1,768	(64) 1,853	(65) 1,926	(55) 2,140	(66) 2,088	(43) 2,259	(1,790) 1,825
Computer Sciences	- -	(10) 1,605	(11) 1,738	(7) 1,853	(2) 1,725	(2) 1,775	(2) 1,975	(6) 2,058	(3) 2,450	(107) 1,790
Economics	(2) 1,475	(4) 1,562	(6) 2,008	(6) 1,841	(7) 2,132	(4) 2,331	(3) 2,108	(4) 2,425	(5) 2,400	(135) 2,042
Mathematics and Statistics	(6) 1,325	(17) 1,492	(25) 1,745	(16) 1,887	(17) 1,936	(9) 1,891	(6) 2,591	(19) 2,263	(9) 2,530	(349) 1,925
Physics	(6) 1,508	(30) 1,508	(88) 1,668	(67) 1,902	(60) 1,952	(49) 2,020	(26) 2,089	(29) 2,327	(25) 2,247	(1,145) 1,931
Psychology	(6) 1,341	(7) 1,467	(16) 1,671	(6) 1,675	(7) 1,817	(5) 2,195	(8) 1,975	(9) 1,947	(1) 2,475	(205) 1,830

*Total includes all years since first degree.

SOURCE: Battelle Columbus Laboratories, National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, November 1, 1974

TABLE 46 - NUMBER AND MEAN MONTHLY SALARIES OF NONSUPERVISORY SCIENTISTS AND ENGINEERS BY DEGREE LEVEL, TYPE OF ESTABLISHMENT AND SELECTED YEARS AFTER FIRST DEGREE, 1974

TYPE OF ESTABLISHMENT & DEGREE LEVEL	SELECTED YEARS SINCE FIRST DEGREE										
	1	3	5	7	10	13	15	20-21	24-25	30-31	Total+
BACHELOR'S DEGREE											
Non-Profit Research Inst.	(135) $ 760	(110) $ 925	(87) $1,033	(65) $1,065	(63) $1,232	(49) $1,358	(43) $1,502	(47) $1,544	(68) $1,615	(24) $1,504	(1,642) $1,199
Educational Institutions	(20) 885	(26) 926	(21) 1,032	(22) 1,190	(14) 1,157	(7) 1,089	(10) 1,315	(11) 1,306	(17) 1,295	(8) 1,543	(376) 1,153
Contract Research Centers	(165) 1,042	(94) 1,149	(103) 1,306	(104) 1,369	(96) 1,517	(103) 1,652	(137) 1,724	(146) 1,849	(278) 1,948	(72) 1,970	(3,306) 1,622
Federal Establishments	(146) 921	(255) 1,143	(247) 1,307	(330) 1,507	(239) 1,676	(320) 1,850	(291) 1,907	(203) 1,984	(316) 1,968	(101) 2,137	(6,146) 1,688
Total Industry	(1,427) 1,054	(898) 1,154	(1,284) 1,273	(942) 1,363	(670) 1,487	(733) 1,613	(889) 1,674	(869) 1,763	(1,387) 1,783	(339) 1,836	(22,357) 1,489
MASTER'S DEGREE											
Non-Profit Research Inst.	(9) $ 986	(39) $1,009	(41) $1,179	(56) $1,249	(44) $1,412	(43) $1,590	(40) $1,720	(53) $1,743	(69) $1,798	(28) $1,951	(1,175) $1,533
Educational Institutions	(1) 925	(5) 945	(19) 1,040	(13) 1,101	(17) 1,307	(7) 1,239	(2) 1,725	(5) 1,455	(19) 1,663	(6) 1,441	(290) 1,318
Contract Research Centers	(15) 1,138	(81) 1,196	(85) 1,332	(113) 1,465	(117) 1,617	(100) 1,771	(120) 1,823	(153) 1,951	(204) 2,031	(60) 2,070	(2,615) 1,745
Federal Establishments	(6) 1,200	(47) 1,152	(94) 1,280	(129) 1,459	(130) 1,658	(143) 1,843	(116) 1,917	(95) 1,920	(119) 2,072	(49) 2,162	(2,427 1,742
Total Industry	(84) 1,171	(317) 1,198	(575) 1,325	(571) 1,430	(526) 1,589	(415) 1,699	(431) 1,794	(439) 1,885	(569) 1,926	(172) 1,958	(10,219) 1,649
DOCTORATE DEGREE											
Non-Profit Research Inst.		(6**) $1,400	(13) $1,278	(48) $1,350	(67) $1,561	(51) $1,609	(39) $1,763	(22*) $1,925	(29*) $2,074	(27) $2,064	(957) $1,702
Educational Institutions		(2**) 950	(16) 1,012	(26) 1,219	(57) 1,420	(42) 1,575	(37) 1,692	(21*) 1,840	(14*) 2,000	(11) 2,250	(758) 1,621
Contract Research Centers		(13**) 1,548	(16) 1,628	(95) 1,637	(143) 1,754	(143) 1,925	(104) 1,972	(65*) 2,075	(45*) 2,281	(55) 2,277	(2,196) 1,946
Federal Establishments		(6**) 1,325	(12) 1,512	(73) 1,444	(134) 1,650	(100) 1,782	(79) 1,866	(54*) 2,050	(41*) 2,246	(42) 2,571	(1,785) 1,902
Total Industry		(28**) 1,523	(60) 1,518	(164) 1,607	(329) 1,822	(237) 1,916	(195) 2,011	(102*) 2,107	(89*) 2,305	(93) 2,351	(4,292) 1,951

[+] Includes all years since first degree. [*] Includes only the first year listed in the set.

** Figures for 3-4 years since first degree

SOURCE: Battelle Columbia Laboratories, National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, Nov. 1, 1974

TABLE 47 - NUMBER AND MEAN MONTHLY SALARIES OF NONSUPERVISORY SCIENTISTS AND ENGINEERS BY HIGHEST DEGREE FIELD AND SELECTED YEARS SINCE DEGREE, 1974

Highest Degree Field	SELECTED YEARS SINCE DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total°
Engineering[1]	(1,194) $1,104	(791) $1,247	(897) $1,451	(658) $1,565	(785) $1,710	(924) $1,757	(780) $1,849	(1,339) $1,871	(344) $1,951	(21,552) $1,565
Chemistry[1]	(103) 950	(106) 1,074	(91) 1,235	(79) 1,309	(84) 1,433	(79) 1,478	(130) 1,604	(230) 1,657	(79) 1,724	(2,801) 1,406
Physics[1]	(75) 1,035	(61) 1,167	(103) 1,447	(89) 1,530	(97) 1,702	(106) 1,775	(80) 1,902	(140) 1,867	(28) 2,198	(2,196) 1,611
Life Sciences[1]	(77) 805	(49) 939	(48) 1,068	(44) 1,202	(26) 1,251	(22) 1,279	(24) 1,450	(52) 1,469	(15) 1,321	(987) 1,117
Social Sciences[1]	(28) 935	(25) 1,019	(17) 1,180	(19) 1,314	(14) 1,614	(3) 1,891	(15) 1,645	(17) 1,704	(3) 1,591	(386) 1,303
Mathematics & Statistics[1]	(126) 1,009	(108) 1,146	(167) 1,427	(105) 1,554	(97) 1,696	(105) 1,733	(65) 1,782	(62) 1,865	(18) 1,783	(2,381) 1,467
Engineering[2]	(263) 1,186	(388) 1,273	(507) 1,481	(477) 1,633	(381) 1,839	(438) 1,862	(351) 1,968	(479) 2,021	(169) 2,088	(9,435) 1,702
Chemistry[2]	(8) 1,018	(31) 1,023	(39) 1,249	(32) 1,417	(34) 1,495	(25) 1,617	(80) 1,683	(98) 1,738	(34) 1,682	(1,064) 1,564
Physics[2]	(8) 1,106	(45) 1,188	(67) 1,407	(60) 1,586	(62) 1,669	(71) 1,792	(72) 1,905	(94) 2,068	(35) 2,060	(1,319) 1,719
Life Sciences[2]	(22) 972	(25) 1,011	(33) 1,102	(30) 1,365	(23) 1,416	(11) 1,461	(28) 1,596	(55) 1,604	(6) 1,258	(583) 1,346
Social Sciences[2]	(10) 1,045	(16) 1,118	(15) 1,281	(17) 1,516	(11) 1,890	(14) 1,821	(15) 1,708	(26) 1,817	(5) 2,200	(353) 1,563
Mathematics & Statistics[2]	(19) 1,082	(45) 1,190	(63) 1,376	(81) 1,584	(52) 1,711	(33) 1,865	(47) 1,895	(56) 1,988	(18) 1,976	(1,172) 1,645
Engineering[3]	-	(23)* 1,577	(140) 1,642	(277) 1,827	(190) 1,933	(153) 1,990	(60)+ 2,129	(47)+ 2,265	(56) 2,365	(2,956) 1,938
Chemistry[3]	-	(8)* 1,381	(53) 1,432	(97) 1,696	(94) 1,801	(60) 1,909	(69)+ 2,079	(81)+ 2,072	(67) 2,259	(1,984) 1,900
Physics[3]	-	(5)* 1,575	(40) 1,547	(112) 1,715	(115) 1,865	(89) 1,950	(49)+ 2,076	(60)+ 2,272	(42) 2,344	(1,708) 1,956
Life Sciences[3]	-	(5)* 1,255	(37) 1,302	(59) 1,513	(33) 1,425	(33) 1,705	(19)+ 1,780	(27)+ 1,921	(5) 2,005	(769) 1,605
Social Sciences[3]	-	(2)* 1,200	(14) 1,492	(22) 1,681	(12) 1,679	(14) 1,967	(11)+ 2,018	(18)+ 2,161	(6) 2,354	(354) 1,859
Mathematics & Statistics[3]	-	(3)* 1,525	(22) 1,565	(33) 1,729	(18) 1,838	(15) 1,945	(8)+ 2,118	(7)+ 2,553	(15) 2,535	(398) 1,940

[1] Bachelor's

[2] Master's

[3] Doctorates

°Total includes all years since first degree

*Includes both 3-4 year since degree

+Includes only the first year listed in the set

SOURCE: Battelle Columbus Laboratories, National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, November 1, 1974

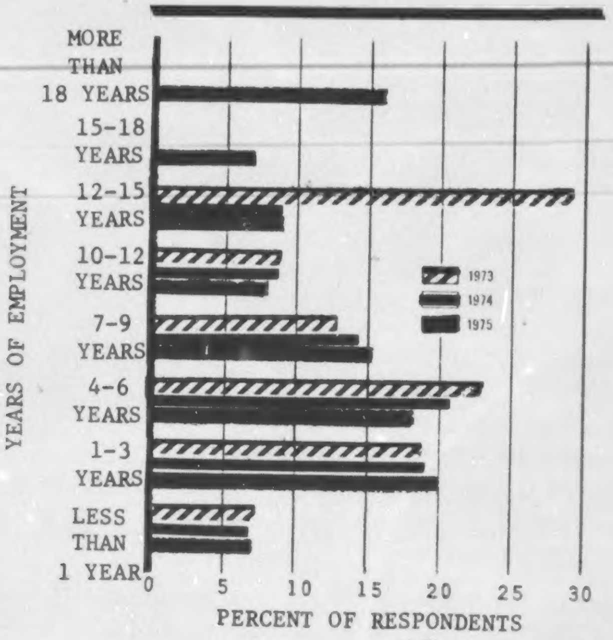
TABLE 48 - NUMBER AND MEAN MONTHLY SALARIES OF BACHELOR'S DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION, SELECTED YEARS SINCE DEGREE, AND SEX, 1974

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total*
Biological and Biomedical Sciences[1]	(36) $ 812	(20) $1,032	(19) $1,277	(17) $1,222	(18) $1,477	(16) $1,509	(15) $1,645	(21) $1,498	(2) $1,625	(465) $1,251
Biological and Biomedical Sciences[2]	(36) 768	(22) 897	(21) 915	(14) 1,092	(4) 925	(7) 1,175	(8) 1,218	(5) 1,235	(9) 1,313	(331) 944
Chemistry[1]	(84) 945	(81) 1,070	(78) 1,235	(59) 1,268	(55) 1,405	(60) 1,516	(81) 1,565	(151) 1,615	(45) 1,720	(1,897) 1,359
Chemistry[2]	(34) 883	(28) 946	(16) 1,106	(14) 1,160	(13) 1,244	(9) 1,069	(14) 1,300	(17) 1,348	(13) 1,463	(500) 1,108
Mathematics & Statistics[1]	(41) 1,005	(27) 1,200	(76) 1,485	(42) 1,616	(36) 1,806	(40) 1,880	(20) 1,900	(21) 2,054	(6) 1,833	(823) 1,609
Mathematics & Statistics[2]	(25) 965	(15) 1,111	(25) 1,295	(15) 1,521	(8) 1,612	(2) 1,500	(7) 1,746	(6) 1,525	(3) 1,975	(289) 1,288

*Total includes all years since first Degree. [1] Males Only [2] Females Only

SOURCE: INDUSTRIAL RESEARCH Magazine, March 1975

CHART 4 - PERCENT OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY YEARS OF EMPLOYMENT, 1973-1975



SOURCE: INDUSTRIAL RESEARCH Magazine, March 1975

CHART 5 - SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY PROFESSION, 1973-1975

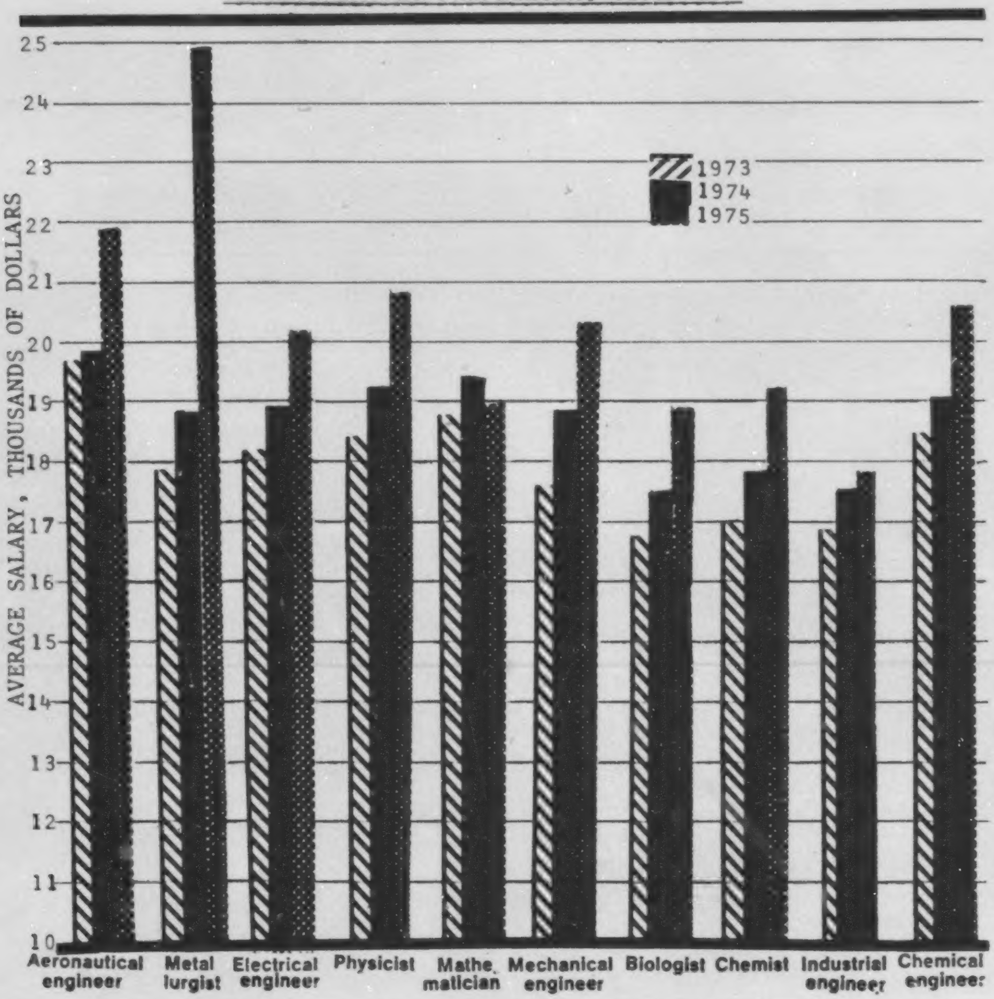
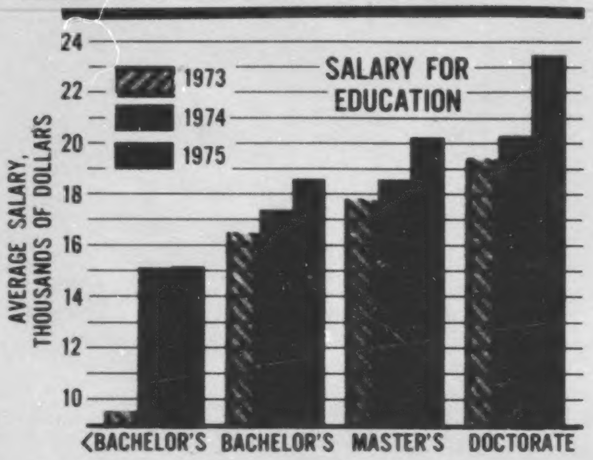


CHART 6 - SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY EDUCATION, 1973-1975



SOURCE: INDUSTRIAL RESEARCH Magazine, March 1975

CHART 7 - SALARIES OF ALL SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT, 1973-1975

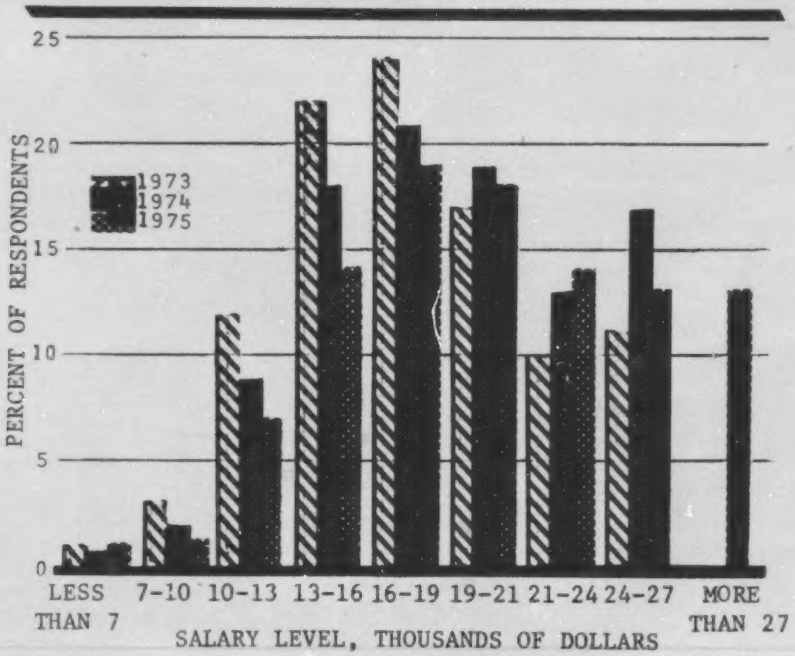
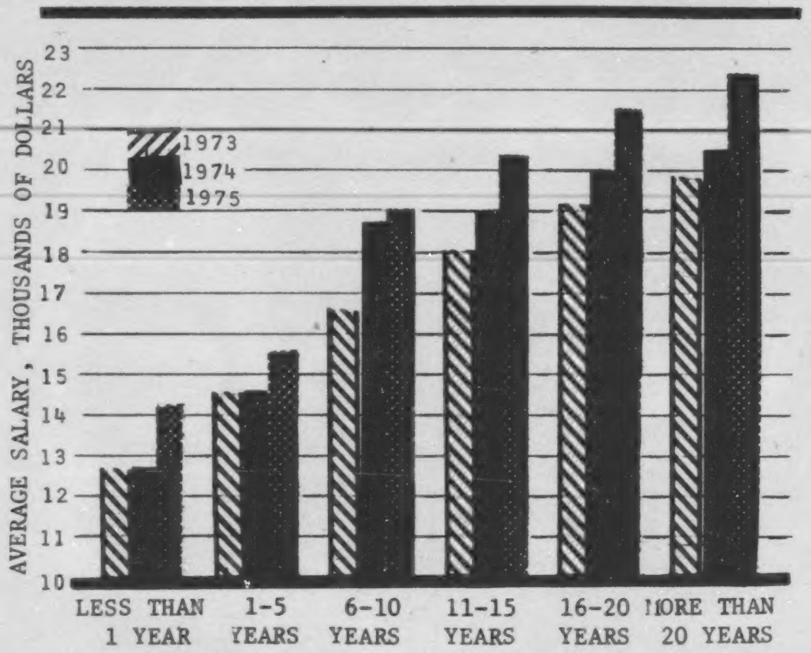


CHART 8 - SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY YEARS OF EXPERIENCE, 1973-1975



SOURCE: U. S. Department of Health, Education and Welfare, National Institutes of Health, Analysis of Sex Differentials Among Ph.D.-Holding Scientists: Salary, Academic Rank, and Predoctoral Awards, Resources Analysis Memo No. 16, May 1975

TABLE 49 - NUMBER AND MEAN ANNUAL SALARY OF DOCTORAL BIOSCIENTISTS BY SEX AND YEAR OF DOCTORATE COHORT, 1973

YEAR OF DOCTORATE	MEN		WOMEN	
	Numbers	Mean Salary	Numbers	Mean Salary
1935 or earlier	760	$24,200	90	$18,600
1936-40	1,370	25,400	120	19,100
1941-45	1,620	26,100	160	18,400
1946-50	2,640	25,100	250	18,700
1951-55	5,930	24,900	530	18,900
1956-60	6,070	23,000	600	17,100
1961-65	7,300	19,900	870	15,700
1966-70	12,230	16,100	2,070	13,300
1971-72	4,970	12,900	970	10,400
TOTALS	42,890	$19,900	5,650	$14,700

SOURCE: American Geological Institute, GEOTIMES, March 1975

TABLE 50 - MEDIAN ANNUAL SALARIES OF GEOSCIENTISTS BY DEGREE LEVEL, TYPE OF EMPLOYER AND SEX, 1974

TYPE OF EMPLOYER	WOMEN			MEN		
	B.A./BS	M.A./MS	PhD	B.A./BS	M.A./MS	PhD
Petroleum Industry	$14,100	$13,200	$23,300	$25,100	$24,000	$24,100
Mining Industry	8,600	12,500	*	22,500	18,400	28,000
Self-employed	20,000	*	*	30,000	30,000	40,000
USGS	16,700	16,600	21,700	24,500	21,000	25,000
Other U.S. Government	10,000	14,600	24,500	18,600	20,000	23,500
State Surveys	11,800	12,000	*	9,600	14,600	19,000
Universities & Colleges	10,500	10,900	14,000	11,000	12,500	17,800
Secondary Schools	9,600	12,300	*	8,400	14,000	17,000

* Insufficient Data

SOURCE: CHEMICAL AND ENGINEERING NEWS, Vol. 53, June 23, 1975, pp. 20-23

TABLE 51 - OVERALL MEDIAN SALARY FOR CHEMISTS BY TYPE OF EMPLOYER AND SEX, 1975

DEGREE LEVEL AND SEX	TYPE OF EMPLOYER				
	Industry	Educational Institutions	Government	Nonprofit Organizations	Self-Employed
BACHELOR'S					
Men	$20,000	$12,700	$19,800	$15,000	$25,000
Women	14,800	9,300	16,700	12,000	n.a.
Total	19,400	11,900	19,100	14,000	22,500
MASTER'S					
Men	21,000	15,000	20,600	17,500	22,500
Women	15,900	12,300	18,600	13,000	n.a.
Total	20,800	14,100	20,100	15,500	22,700
PH.D.					
Men	25,500	18,000	24,600	22,900	26,000
Women	20,900	15,000	24,900	17,500	n.a.
Total	25,300	18,000	24,700	21,900	25,500

TABLE 52 - OVERALL MEDIAN SALARY FOR CHEMISTS BY WORK ACTIVITY, DEGREE AND SEX, 1975

DEGREE LEVEL AND SEX	WORK ACTIVITY				
	Management	Research & Development	Teaching	Marketing & Production	Other
BACHELOR'S					
Men	$24,000	$18,000	$12,000	$18,700	$16,900
Women	18,000	15,000	9,400	12,000	14,000
Total	24,000	17,800	10,700	18,500	16,500
MASTER'S					
Men	26,000	19,900	15,000	20,000	18,600
Women	17,000	14,200	12,800	n.a.	17,200
Total	25,500	19,200	14,500	19,900	18,400
PH.D.					
Men	30,000	23,300	18,000	24,000	21,900
Women	23,300	19,000	15,000	n.a.	17,800
Total	30,000	23,000	17,800	24,000	21,500

n.a. - data not available

SOURCE: CHEMICAL AND ENGINEERING NEWS, Vol. 53, June 23, 1975, pp. 20-23

TABLE 53 - OVERALL MEDIAN SALARIES FOR CHEMISTS BY DEGREE, SPECIALTY AND SEX, 1975

DEGREE AND SEX	SPECIALITY						
	Analytical	Inorganic	Organic	Physical	Polymer	Biochemistry	Other
BACHELOR'S							
Men	$18,000	$18,800	$20,100	$16,300	$21,000	$16,500	$20,000
Women	14,000	n.a.	14,800	n.a.	14,500	13,000	14,200
Total	17,600	17,800	20,000	17,000	20,700	15,600	20,000
MASTER'S							
Men	19,100	19,700	20,000	24,200	21,600	20,000	20,000
Women	14,000	n.a.	14,100	n.a.	n.a.	13,600	15,000
Total	18,900	19,500	19,900	24,000	21,400	18,500	19,300
PH.D.							
Men	21,900	19,800	22,000	22,000	25,300	23,500	24,000
Women	15,700	15,000	17,200	17,000	n.a.	18,900	17,000
Total	21,600	19,100	22,000	22,000	25,100	22,800	24,000

TABLE 54 - OVERALL MEDIAN SALARIES AND PERCENTAGE DISTRIBUTION OF CHEMISTS BY GEOGRAPHICAL REGION, DEGREE LEVEL, 1975

GEOGRAPHICAL REGION	B. S.		M. S.		PH. D.	
	Salary	% in Region	Salary	% in Region	Salary	% in Region
Pacific	$18,100	11.1	18,600	10.2	$23,000	10.6
Mountain	17,100	3.5	17,800	2.9	21,100	3.5
West North Central	16,000	5.4	17,000	5.2	20,200	7.2
East North Central	18,700	23.5	20,000	24.9	23,100	21.4
West South Central	19,400	7.7	18,600	6.5	21,600	6.7
East South Central	18,200	3.7	18,000	3.8	19,300	3.8
Middle Atlantic	19,000	22.7	20,000	22.9	24,500	20.9
South Atlantic	20,000	15.3	20,000	15.8	23,000	18.8
New England	19,000	7.1	19,300	7.8	22,200	7.2

n.a. - data not available

SOURCE: CHEMICAL AND ENGINEERING NEWS, Vol. 53, June 23, 1975, pp. 20-23

TABLE 55 - 1975 MEDIAN SALARY OF INDUSTRIAL CHEMISTS AND ALL CHEMISTS BY DEGREE LEVEL AND YEARS OF EXPERIENCE

YEARS	B. S.		M. S.		PH. D.	
	All	Industrial	All	Industrial	All	Industrial
1	$10,500	$10,500	$12,000	$13,000	$17,000	$18,000
2-4	11,800	12,000	13,200	14,200	18,000	19,100
5-9	15,100	15,400	16,200	17,000	20,000	22,800
10-14	17,300	17,600	18,200	19,500	22,900	26,000
15-19	20,000	20,000	21,200	22,000	25,000	27,100
20-24	21,600	22,000	22,000	23,000	27,700	29,500
25-59	22,000	22,000	24,000	25,000	28,000	30,000
30-34	23,000	23,000	24,000	25,000	28,500	30,000
35-39	24,400	24,000	23,600	25,000	30,300	33,000
40+	25,000	24,000	22,400	22,000	27,000	n.a.
Overall	19,000	19,400	19,800	20,800	23,000	25,300

TABLE 56 - MEDIAN ANNUAL SALARIES FOR CHEMISTS AND CHEMICAL ENGINEERS OF ALL EXPERIENCE LEVELS BY DEGREE, 1973-1975 (WEIGHTED AVERAGE)

YEAR	CHEMISTS			CHEMICAL ENGINEERS		
	B. S.	M. S.	PH. D.	B. S.	M. S.	PH. D.
1973	$16,800	$17,500	$20,500	$20,200	$22,000	$23,100
1974	17,500	18,400	21,700	21,300	22,400	24,800
1975	19,000	19,800	23,000	24,000	25,000	26,000

SOURCE: American Chemical Society, Professionals in Chemistry 1974, p. 26

TABLE 57 - MEDIAN SALARIES OF MEN AND WOMEN CHEMISTS IN ACS BY DEGREE LEVEL AND YEARS OF EXPERIENCE, 1974

YEARS OF EXPERIENCE	B. S.		M. S.		PH. D.	
	Men	Women	Men	Women	Men	Women
2-4	$11,400	$10,600	$12,800	$11,300	$16,500	$14,500
5-9	14,000	12,000	15,000	12,500	19,200	14,600
10-14	16,500	14,000	17,400	14,000	21,200	18,000
15-19	18,000	15,000	19,500	15,200	24,000	19,700
20-24	20,000	15,700	21,500	17,000	25,700	21,000
25-29	20,900	16,000	23,400	15,700	26,800	21,300
30-34	21,800	16,300	23,000	16,500	27,500	18,700
35-39	21,600	18,300	22,500	n.a.	27,300	n.a.
40+	23,000	n.a.	24,500	n.a.	25,600	n.a.

n.a. - data not available

SOURCE: American Chemical Society, 1975 Report of Chemists' Salaries and Employment Status, September 1974

TABLE 58 - 1975 MEDIAN SALARY AND 1974 INCOME OF CHEMISTS BY DEGREE LEVEL AND YEARS OF EXPERIENCE

YEARS OF EXPERIENCE	1975 SALARY			1974 INCOME		
	B. S.	M. S.	PH.D.	B. S.	M. S.	PH.D.
1	$10,500	$12,000	$17,000	$ 8,500	$ 8,900	$11,100
2-4	11,800	13,200	18,000	11,200	12,600	16,500
5-9	15,100	16,200	20,000	15,000	16,100	20,000
10-14	17,300	18,200	22,900	17,000	18,000	23,000
15-19	20,000	21,200	25,000	19,900	21,600	25,200
20-24	21,600	22,000	27,700	21,300	21,900	28,000
25-29	22,000	24,000	28,000	22,000	24,000	30,000
30-34	23,000	24,000	28,500	23,100	24,000	29,700
35-39	24,400	23,600	30,300	25,300	24,300	32,000
40+	25,000	22,400	27,000	26,500	24,000	31,000
Overall	19,000	19,800	23,000	19,000	19,900	23,000

SOURCE: "A Salary Profile of Electronic Data Processing Occupations", by Donald J. Blackmore, MONTHLY LABOR REVIEW, March 1975

TABLE 59 - NUMBER AND AVERAGE WEEKLY EARNINGS FOR SELECTED EDP OCCUPATIONS BY GEOGRAPHICAL AREA, FEBRUARY 1973

OCCUPATION	NUMBER OF WORKERS	GEOGRAPHICAL AREA				
		United States	North east	South	North Central	West
SYSTEMS ANALYSTS						
Class A	13,275	$306.00	$314.50	$296.50	$298.00	$315.00
Class B	14,640	261.50	272.00	253.00	258.50	262.00
Class C	3,974	225.50	229.50	214.00	230.50	217.50
COMPUTER PROGRAMMERS						
Class A	14,370	247.50	257.00	231.00	243.00	260.00
Class B	20,324	208.00	216.00	196.00	206.50	214.50
Class C	7,386	175.50	178.00	158.00	181.00	182.50
COMPUTER OPERATORS						
Class A	13,285	185.50	186.00	173.00	189.00	193.00
Class B	26,523	156.50	157.00	144.00	161.50	166.00
Class C	11,196	131.50	133.50	121.00	135.50	137.00
KEYPUNCH OPERATORS						
Class A	51,405	132.00	131.00	123.50	134.50	141.50
Class B	67,537	115.00	115.50	105.50	118.50	123.00

NOTE: The various classes are distinguished by level of responsibility.

50 SOURCE: U.S. Department of Labor, News Release 75-373 dated July, 1975

TABLE 60 - NUMBER AND AVERAGE SALARIES FOR SELECTED WHITE-COLLAR OCCUPATIONS IN PRIVATE INDUSTRY, MARCH 1975

OCCUPATION AND CLASS	Number of Employees	AVERAGE SALARIES	
		Monthly	Annual
Accountants II	12,806	$1,065	$12,785
Accountants III	29,738	1,205	14,458
Accountants IV	19,228	1,468	17,618
Chief Accountants II	1,159	1,777	21,323
Chief Accountants III	798	2,186	26,226
Chemists I	1,574	983	11,801
Chemists II	3,215	1,107	13,288
Chemists III	8,090	1,298	15,572
Chemists IV	10,134	1,600	19,204
Chemists V	7,238	1,892	22,700
Chemists VI	3,977	2,227	26,729
Chemists VII	1,566	2,614	31,362
Chemists VIII	415	3,155	37,855
Engineers I	14,592	1,076	12,917
Engineers II	29,084	1,183	14,197
Engineers III	84,519	1,361	16,330
Engineers IV	114,108	1,620	19,443
Engineers V	80,836	1,869	22,427
Engineers VI	41,314	2,176	26,109
Engineers VII	16,239	2,425	29,101
Engineers VIII	4,170	2,843	34,114
Engineering Technicians I	3,542	719	8,625
Engineering Technicians II	12,245	831	9,970
Engineering Technicians III	22,853	950	11,397
Engineering Technicians IV	29,342	1,092	13,101
Engineering Technicians V	19,158	1,236	14,829
Attorneys I	571	1,268	15,220
Attorneys II	1,341	1,480	17,757
Attorneys III	1,953	1,880	22,558
Attorneys IV	1,991	2,347	28,159
Attorneys V	1,021	2,837	34,040
Clerks, Accounting I	83,611	595	7,141
Clerks, Accounting II	69,858	748	8,982
Buyers II	12,063	1,111	13,337
Buyers III	13,232	1,333	15,995
Drafters I	20,313	749	8,988
Drafters II	29,764	935	11,217
Drafters III	30,285	1,191	14,289
Job Analysts II	279	1,045	12,543
Job Analysts III	644	1,246	14,949
Job Analysts III	492	1,538	18,459
Directors of Personnel I	1,008	1,401	16,809
Directors of Personnel II	1,896	1,661	19,938
Directors of Personnel III	1,062	2,086	25,033
Directors of Personnel IV	287	2,653	31,841
Directors of Personnel V	80	3,320	39,843

SOURCE: U.S. Department of Labor, National Survey of Professional, Administrative, Technical and Clerical Pay, March, 1974, pp. 13,14

TABLE 61 - NUMBER AND AVERAGE SALARIES FOR SELECTED PROFESSIONAL, ADMINISTRATIVE, TECHNICAL AND CLERICAL OCCUPATIONS IN PRIVATE INDUSTRY, MARCH 1974

OCCUPATION AND CLASS	Number of Employees	Monthly Salaries		Annual Salaries	
		Mean	Median	Mean	Median
Accountants II	13,735	$ 962	$ 940	$11,540	$11,280
Accountants III	28,869	1,107	1,086	13,285	13,032
Accountants IV	19,206	1,338	1,325	16,051	15,900
Chief Accountants II	1,222	1,673	1,666	20,072	19,992
Chief Accountants III	768	1,984	1,940	23,805	23,280
Chemists I	1,719	888	891	10,660	10,692
Chemists II	4,085	1,034	1,020	12,408	12,240
Chemists III	9,540	1,191	1,180	14,298	14,160
Chemists IV	12,161	1,440	1,433	17,283	17,196
Chemists V	8,725	1,725	1,708	20,702	20,496
Chemists VI	4,191	2,007	1,990	24,079	23,880
Chemists VII	1,564	2,350	2,292	28,203	27,504
Chemists VIII	412	2,873	2,853	34,475	34,236
Engineers I	15,358	992	980	11,901	11,760
Engineers II	30,532	1,098	1,080	13,171	12,960
Engineers III	83,255	1,263	1,250	15,160	15,000
Engineers IV	113,436	1,494	1,482	17,929	17,784
Engineers V	81,652	1,721	1,703	20,654	20,436
Engineers VI	44,283	1,986	1,966	23,827	23,592
Engineers VII	16,593	2,247	2,197	26,960	26,364
Engineers VIII	3,688	2,622	2,525	31,469	30,300
Engineering Technicians I	4,039	665	652	7,975	7,824
Engineering Technicians II	12,810	760	751	9,122	9,012
Engineering Technicians III	26,151	874	866	10,491	10,392
Engineering Technicians IV	31,853	998	988	11,974	11,856
Engineering Technicians V	18,247	1,138	1,130	13,654	13,560
Attorneys II	1,504	1,363	1,334	16,357	16,008
Attorneys III	2,443	1,757	1,714	21,082	20,568
Attorneys IV	1,968	2,163	2,103	25,956	25,236
Clerks, Accounting I	92,282	551	530	6,607	6,358
Clerks, Accounting II	69,323	697	669	8,367	8,030
Secretaries II	76,386	685	673	8,221	8,082
Secretaries III	69,133	729	720	8,742	8,638
Drafters I	18,350	709	695	8,507	8,342
Drafters II	28,581	870	855	10,443	10,256
Drafters III	31,067	1,089	1,041	13,070	12,498
Computer Operators II	10,467	636	626	7,632	7,512
Computer Operators III	19,717	741	730	8,887	8,760
Computer Operators IV	11,498	857	847	10,279	10,164

SOURCE: U.S. Department of HEW, Public Health Service, Position Classification and Pay in State and Territorial Public Health Laboratories, 1974

TABLE 62 - AVERAGE ANNUAL SALARIES FOR SELECTED POSITIONS IN STATE AND TERRITORIAL PUBLIC HEALTH LABORATORIES BY STATE, 1974

STATE	POSITION					
	Laboratory Aide I	Laboratory Technician I	Micro-biologist I	Chemist I	Asst. Lab. Director	Lab. Director
Alabama	$5,486	$ 6,949	$10,407	*	$19,884	$23,959
Alaska	9,558	10,734	14,916	$17,244	*	33,462
Arizona	6,013	8,546	11,208	11,208	18,907	22,661
Arkansas	5,324	6,390	9,666	*	14,989	24,096
California	7,470	9,480	9,498	10,734	23,964	32,844
Colorado	5,688	6,911	11,044	11,004	*	25,242
Connecticut	6,561	7,266	8,958	8,958	22,210	26,056
Delaware	6,280	7,145	10,514	10,514	*	24,246
D. C.	7,584	11,090	11,090	12,826	27,537	32,909
Florida	5,359	6,152	10,276	10,276	18,284	21,447
Georgia	5,898	6,996	9,948	9,948	18,900	22,800
Hawaii	6,918	8,418	10,734	11,274	*	22,322
Idaho	5,844	6,324	10,764	10,764	17,592	21,462
Illinois	6,546	7,932	11,814	11,814	26,274	30,540
Indiana	*	6,851	11,713	11,713	22,100	35,438
Iowa	5,544	7,608	9,850	9,850	22,300	25,613
Kansas	*	5,208	9,660	10,146	*	20,106
Kentucky	4,122	5,706	9,846	10,860	12,450	21,738
Louisiana	5,190	6,834	9,372	10,002	13,800	27,852
Maine	6,058	7,176	9,412	9,412	17,498	20,098
Maryland	5,895	7,237	10,382	10,382	24,210	34,200
Massachusetts	6,526	8,461	10,699	10,699	26,572	28,824
Michigan	7,415	9,433	11,097	11,097	30,077	37,087
Minnesota	6,294	7,104	8,334	*	*	25,686
Mississippi	4,356	6,102	9,012	9,012	*	18,738
Missouri	5,076	7,128	8,658	8,958	15,816	19,146
Montana	5,448	7,284	9,852	9,852	*	18,816
Nebraska	5,040	6,714	9,618	9,618	16,722	20,130
Nevada	6,678	*	9,915	11,127	14,967	21,342
New Hampshire	5,791	7,988	8,711	*	*	17,249
New Jersey	6,003	8,870	9,877	9,877	*	30,041
New Mexico	5,700	7,140	9,360	9,360	17,820	23,550
New York	5,870	8,775	11,614	11,614	*	50,600
North Carolina	5,568	7,974	11,490	10,476	18,450	23,484
North Dakota	4,854	5,112	10,128	10,128	15,438	16,956
Ohio	6,968	7,852	10,047	10,047	20,509	24,396
Oklahoma	5,940	*	10,770	10,260	20,640	23,760
Oregon	5,790	*	*	*	15,132	20,310
Pennsylvania	6,925	9,086	12,558	12,558	22,122	25,526
Rhode Island	6,006	7,605	9,776	*	13,841	22,031
South Carolina	5,104	6,163	10,473	10,473	17,681	33,196
South Dakota	4,810	6,328	10,052	10,052	*	16,915
Tennessee	5,052	6,420	10,098	10,098	17,556	21,354
Texas	5,562	7,740	10,764	10,764	21,250	24,250
Utah	5,490	6,984	10,728	10,728	21,120	23,622
Vermont	5,369	7,267	9,802	9,802	14,534	20,930
Virginia	4,980	6,492	9,696	*	16,964	19,775
Washington	6,252	6,870	9,570	*	28,872	23,298
West Virginia	5,460	*	8,820	8,820	13,260	14,670
Wisconsin	7,961	7,719	11,466	11,466	24,000	30,000
Wyoming	*	6,648	9,168	*	*	16,398
Guam	5,126	5,780	8,434	*	*	13,663
Puerto Rico	3,480	4,020	6,600	6,600	17,100	18,300
Virgin Islands	4,242	*	8,353	*	*	13,921

*No Position Reported

SOURCE: U. S. Department of Health, Education & Welfare, Public Health Service, Position Classification & Pay in State & Territorial Public Health Laboratories, 1974

TABLE 63 - AVERAGE ANNUAL SALARIES OF SELECTED POSITIONS IN STATE AND TERRITORIAL PUBLIC HEALTH LABORATORIES, 1971 AND 1974

Position Classification	Average Annual Salaries		Percent Increase
	1971	1974	1971-1974
Lab Aide I	$ 4,645	$ 5,853	26.0
Lab Aide II	5,349	6,610	23.6
Lab Technician I	5,999	7,307	17.6
Lab Technician II	7,142	8,618	20.7
Microbiologist I	8,468	10,124	19.6
Microbiologist II	9,693	11,624	19.9
Microbiologist III	11,410	13,573	19.0
Microbiologist IV	13,781	16,321	18.4
Microbiologist V	14,953	18,160	21.4
Chemist I	8,759	10,522	20.1
Chemist II	10,023	12,009	19.8
Chemist III	11,675	13,828	18.4
Chemist IV	14,048	16,746	19.2
Chemist V	15,874	19,659	23.8
Asst. Lab Director	15,975	19,522	22.2
Lab Director	19,625	23,505	19.8

SALARIES OF ENGINEERS

- The *Engineering Manpower Commission's* 11th biennial survey of engineers' salaries, *PROFESSIONAL INCOME OF ENGINEERS, 1974*, includes data from 813 employers covering 181,699 engineers, or about 22% of the total number of engineers employed in the United States. Median salaries for engineers in all areas of employment rose sharply for experienced engineers as well as for new graduates. Hoever, salary increases ranging from 3.3% to 6.8% per year, depending on age and experience, did not keep pace with the escalating cost of living as measured by the consumer price index, which rose by 6.2% from 1972 to 1973 and 11.4% from July 1973 to July 1974.

The overall average annual salary for all engineers in 1974, without regard to age, type of employer, supervisory status or degree level, was $19,000. Half of all engineers had salaries between $15,650 and $22,950.

By type of industry, the petroleum industry tended to pay the highest offers, followed by the chemical industry (Table 64).

By employment group, salaries ranged from highs of $22,350 in the communications industry and $22,100 in research and development to lows of $16,650 in state government and $16,950 in the fabricated metals industry (Tables 65 and 66).

Engineers working in the east north central states had the highest median salaries - $22,450 - and those working in the New England area the lowest - $18,400 (Tables 67 and 69).

Level of education also has a significant effect on salaries. In 1974, the average for master's degree holders was 8% higher that for bachelor's and salaries for Ph.D.'s were 25% above the median for engineers with only a bachelor's degree (Table 68).

Supervisory responsibility brings consistently higher salaries with the median supervisory salary 33% higher than the median for non-supervisors. Large companies tended to have higher salary scales than small ones, but the difference was less pronounced than that between supervisors and nonsupervisors or between the different degree levels.

Chart 9 presents median salaries of engineers for 1953-1974.

- The *American Chemical Society* reports that the median annual salary for chemical engineers in 1975 was $24,000 for B.S. holders; $25,000 for M.S. holders; and $26,000 for Ph.D.'s (Table 70). Additional salary data for chemical engineers are found in tables 14-18, and Table 56. See also the discussion on page 2.

- The *National Society of Professional Engineers'* eleventh biennial survey of engineer earnings - *PROFESSIONAL ENGINEERS' INCOME AND SALARY SURVEY* - found an increase of 13% over the 1971 median income to $20,660 for 1973. This increase was mostly consumed by the rising cost of living, so that the two-year increase in real spending power was only 3.4%.

This survey is based on a sample of 23,000 questionnaires returned from NSPE members. At various levels, 90% of the respondents earned at least $13,830; 75% earned at least $16,700; 50% earned at least $20,660; 25% earned at least $26,670; and 10% earned at least $35,470. Self-employed engineers earn almost $10,000 more than do salaried engineers at the median level ($19,120 versus $29,150). The upper decile differences are even greater with self-employed engineers earning $58,120 and salaried engineers earning $30,590 (Table 81).

Among salaried engineers, those working for construction-contractor firms had the highest earnings in 1973 - $24,220 (Table 78). From beginning engineers to those with 20 years of experience, the construction-contractor firms pay the highest salaries - (Tables 71 and 73).

By type of work, engineers in executive-administrative positions had the highest earnings followed by those doing consulting work. Design, production and maintenance are activities where experience yields relatively small earnings increments. Engineers in these occupations seldom earn more than $20,000 even after many years in the field (Tables 72 and 79).

The fields of chemical, aeronautical and aerospace engineering, and the heterogeneous "other" category including engineers in executive-administrative positions, show the highest salary levels, as they have in the past. In 1973, the small petroleum and mining fields also showed high salaries. Agricultural engineering is lowest, as in past surveys (Tables 74 and 76).

By level of education, those engineers with less than a bachelor's degree experienced the highest percentage increase in earnings - 16% (Table 75). By geographic region, engineers employed in the New England and Middle Atlantic states had the highest median income for 1973 - $22,530, and those employed in the plains states the lowest - $18,990 (Table 77).

- The twelfth biennial salary survey conducted by the *American Society of Civil Engineers* reports that the average of median entrance salaries (all grades combined) paid in the five major employment categories (excludes education) has increased 8.3% between 1971 and 1973. Railroads, utilities and industry paid the highest average median entrance rate of the five employment categories - $17,344 (Table 82). By geographic region and employment category, civil engineers working for contracting firms in the far west had the highest entrance and maximum median salaries - $16,900 and $21,000 respectively (Table 83).

By class of employment and geographic region, those civil engineers working for the federal government in the Middle Atlantic states had the highest median salary - $21,960 (Table 84). For breakdowns by ASCE grades and equivalent federal GS-grades by class of employment, see Table 85.

- According to nearly 50,000 returns from the 1975 membership survey of the *Institute of Electrical and Electronics Engineers*, almost 50% of EE's are making over $23,000 per year. The average IEEE member in the U.S. has a salary of $23,544, has 17.8 years of experience, is 41.9 years old, has worked for 2.6 employers and has been with his present employer for 10.6 years.

By primary end product or function of plant or institution, those EE's working in power generation had the highest mean salaries in 1975 - $25,210, and those working in schools, universities or libraries, the lowest - $21,860 (Table 86). By primary technical competence, those EE's working in engineering management had considerably higher salaries than other areas studied, averaging $29,410 (Table 87).

By racial group, IEEE Caucasians earned the highest salaries - $23,795 and Spanish-surnamed the lowest - $21,378 (Table 89). Chart 10 shows lower earnings of women IEEE members than men, with the mean salary for men being $23,715 and for women, $19,697.

- The survey of average earnings for industrial engineers in 1975 conducted by the *American Institute of Industrial Engineers* shows a 15% increase over the previous year. Median annual compensation for the period May 1, 1974 through April 30, 1975 was $21,740. Compensation varies by educational and job level, length of experience, geographic area, and size and type of employer organization.

Industrial engineers employed by consulting firms had the highest median income for 1975 - $27,000 and those employed by rubber and miscellaneous plastics products firms the lowest - $16,501 (Table 90).

By geographic area, those industrial engineers employed in the Pacific states had the highest median income - $21,500 and those employed in the mountain states the lowest - $19,418 (Table 93). For breakouts by degree level and years of experience, see Tables 91 and 92 respectively.

- The *American Society for Metals* conducted a salary and fringe benefit survey of its members in June 1973. Reporting on results based on more than a 30% response to a comprehensive survey sent to 14,300 ASM members, the typical ASM member had a median annual salary of $19,000, 18.0 years of experience, is 43.0 years of age, has a bachelor's as his highest earned degree, received his degree in a technical/scientific curriculum, has been with 3.0 employers, and has been with his present employer 9.0 years.

Highest salaries were earned by ASM members working in the Middle Atlantic states. Among the members, metallurgical and materials engineers working in the New England states had the highest salary (Table 94). Those ASM members who received their highest degree in chemical engineering earned higher salaries than those with degrees in other fields (Table 97). Additional data from this survey are presented in Tables 95 and 96.

- The salaries of engineering technicians increased about 10% between 1971 and 1973 according to a study by the *Engineering Manpower Commission of Engineers Joint Council*. In the 1973 survey, based on data from 566 employers covering nearly 58,000 technicians, the average engineering technician has had about 14 years of experience, was about 34 years old and earned $10,700 a year. Table 98 presents median salaries of engineering technicians by type of employment and selected years since graduation.

Engineering technicians working in the southern states have higher median salaries in the early stages of their careers, but at higher experience levels, technicians working in the north central states earn more (Table 99).

In the elite group of graduates of four year bachelor of technology programs, median salaries start at $9,400 annually, 15% higher than the median for two-year graduates and 37% more than the median for non-graduates. Table 100 presents median salaries of bachelor's degree technologists by type of employment and years since graduation.

SOURCE: Engineering Manpower Commission, Professional Income of Engineers, 1974

TABLE 64 - NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY TYPE OF INDUSTRY AND SELECTED YEARS SINCE BACCALAUREATE, 1974

TYPE OF INDUSTRY	YEARS SINCE BACCALAUREATE									
	0	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
Aerospace	(30) $11,600	(238) $12,200	(407) $14,700	(480) $16,000	(1,785) $17,850	(2,525) $21,000	(2,201) $22,100	(2,494) $22,750	(1,335) $23,150	(708) $22,350
Chemicals	(109) 12,150	(976) 12,900	(951) 15,800	(776) 17,250	(2,520) 19,200	(1,649) 22,350	(1,259) 23,450	(1,804) 24,300	(807) 25,300	(1,343) 25,600
Construction	(183) 12,000	(599) 12,800	(660) 15,850	(512) 17,150	(1,222) 18,750	(802) 20,750	(672) 21,350	(703) 21,700	(524) 22,050	(551) 22,150
Electrical Equipment	(111) 10,800	(1,362) 11,600	(1,861) 14,850	(1,713) 16,400	(4,602) 18,500	(5,010) 21,300	(3,744) 22,050	(4,885) 22,450	(2,235) 22,800	(2,257) 22,900
Electronic Equipment	(130) 11,250	(753) 12,150	(1,533) 15,700	(1,212) 17,350	(3,180) 19,450	(2,689) 22,150	(1,569) 22,900	(1,581) 23,400	(517) 23,850	(631) 24,000
Instruments	(13) 11,300	(46) 12,100	(55) 15,000	(45) 16,250	(101) 17,850	(78) 19,850	(60) 20,450	(71) 20,800	(49) 21,200	(51) 21,300
Machinery	(28) 11,700	(59) 12,250	(99) 14,550	(81) 15,600	(311) 17,050	(221) 19,150	(226) 19,800	(230) 20,200	(203) 20,500	(214) 20,450
Metals	(94) 11,600	(393) 12,250	(331) 14,900	(308) 16,100	(768) 17,600	(553) 19,650	(466) 20,200	(589) 20,550	(350) 20,850	(411) 20,950
Mining	(1) -	(5) 13,800	(18) 15,500	(12) 16,350	(36) 17,750	(36) 20,600	(32) 22,000	(46) 23,400	(15) 25,950	(38) 29,250
Paper	(4) -	(7) 12,550	(22) 15,400	(22) 16,700	(93) 18,350	(87) 20,650	(59) 21,350	(82) 21,850	(51) 22,350	(46) 22,550
Petroleum	(72) 12,350	(279) 13,100	(325) 16,000	(259) 17,350	(601) 19,150	(561) 21,750	(471) 22,550	(759) 23,150	(406) 23,800	(522) 24,100
Mechanical Equipment	(110) 11,550	(442) 12,150	(363) 14,600	(360) 15,750	(967) 17,250	(734) 19,300	(627) 19,800	(715) 20,100	(454) 20,300	(530) 20,200
Food	(2) -	(6) 14,750	(13) 16,350	(9) 17,100	(28) 18,250	(39) 20,300	(17) 21,100	(19) 21,650	(10) 21,900	(25) 19,550
Consulting & Engineering Services	(240) 11,950	(607) 12,600	(467) 15,250	(457) 16,600	(1,062) 18,400	(760) 21,150	(578) 22,000	(720) 22,600	(479) 23,150	(769) 23,300

SOURCE: Engineering Manpower Commission, Professional Income of Engineers, 1974

TABLE 65 - NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY TYPE OF EMPLOYMENT GROUP AND SELECTED YEARS SINCE BACCALAUREATE, 1974

TYPE OF EMPLOYMENT	YEARS SINCE BACCALAUREATE									
	0	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
All Industry	(964) $11,450	(5,335) $12,200	(6,615) $15,300	(5,284) $16,750	(15,095) $18,700	(13,544) $21,450	(10,379) $22,300	(13,143) $22,900	(6,835) $23,550	(7,990) $23,850
All Manufacturing Industries	(371) 11,350	(2,746) 12,100	(3,781) 15,100	(3,169) 16,500	(9,376) 18,450	(8,865) 21,250	(7,018) 22,150	(9,245) 22,800	(4,394) 23,500	(4,608) 23,850
All Non-Mfg. Industries	(593) 11,450	(2,589) 12,250	(2,834) 15,600	(2,115) 17,150	(5,719) 19,200	(4,679) 21,900	(3,361) 22,700	(3,898) 23,200	(2,441) 23,650	(3,382) 23,850
Federal Government	(33) 10,850	(176) 11,650	(365) 14,850	(320) 16,350	(991) 18,350	(792) 21,250	(519) 22,100	(604) 22,750	(340) 23,400	(412) 23,650
State Government	(48) 10,900	(152) 11,500	(276) 13,750	(172) 14,750	(475) 16,050	(470) 17,750	(382) 18,300	(374) 18,650	(340) 19,050	(456) 19,200
Local Government	(11) 11,950	(58) 12,550	(121) 15,000	(87) 16,150	(284) 17,750	(270) 20,100	(244) 20,700	(248) 21,050	(201) 21,150	(180) 20,700
Education	(9) 10,750	(15) 11,100	(116) 12,750	(180) 13,650	(1,066) 14,900	(1,413) 17,350	(1,185) 18,350	(1,091) 19,250	(797) 20,350	(1,157) 20,700
Research and Development	(41) 11,400	(250) 12,400	(526) 16,500	(510) 18,400	(1,841) 20,800	(1,846) 23,900	(1,144) 24,750	(1,318) 25,300	(489) 25,750	(554) 25,950
Industrial R & D	(25) 11,800	(79) 12,650	(144) 16,000	(139) 17,600	(565) 19,850	(643) 23,250	(474) 24,400	(523) 25,250	(209) 26,200	(171) 26,550
Research Laboratories	(5) 10,500	(23) 11,350	(65) 15,050	(85) 16,950	(329) 19,500	(390) 22,650	(237) 23,200	(295) 23,200	(112) 22,600	(82) 21,750
Communications	(66) 10,900	(728) 12,000	(1,244) 16,700	(888) 18,850	(2,119) 21,650	(2,722) 25,200	(2,266) 26,150	(1,662) 26,750	(1,408) 27,300	(1,454) 27,400
Electric Utilities	(172) 11,450	(993) 12,150	(983) 14,950	(598) 16,300	(1,519) 18,100	(1,226) 20,850	(901) 21,750	(1,108) 22,450	(702) 23,250	(1,211) 23,600
Gas Utilities & Pipelines	(13) 11,750	(46) 12,400	(67) 14,950	(40) 16,100	(100) 17,700	(101) 20,000	(70) 20,700	(105) 21,200	(68) 21,700	(83) 21,950

SOURCE: Engineering Manpower Commission, Professional Income of Engineers, 1974

TABLE 66 - MEDIAN SALARIES OF ENGINEERS BY TYPE OF EMPLOYMENT GROUP, 1974

EMPLOYMENT GROUP	SALARY
State Government	$16,650
Fabricated Metals	16,950
Education*	17,650
Instruments	17,850
Electric Utilities	17,950
Machinery	18,100
Local Government	18,400
Construction	18,450
Consulting Firms	18,500
Gas Utilities	18,500
Food	18,800
Electronic Equipment	19,200
Metals	19,200
Federal Government	19,450
Paper	19,750
Electrical Equipment	19,750
Petroleum	20,350
Aerospace	20,550
Mining	20,600
Chemicals	20,650
Research & Development	22,100
Communications	22,350

* Mostly 9-month basis.

TABLE 67 - MEDIAN SALARIES OF ENGINEERS IN INDUSTRY AND GOVERNMENT BY GEOGRAPHICAL REGION, 1974

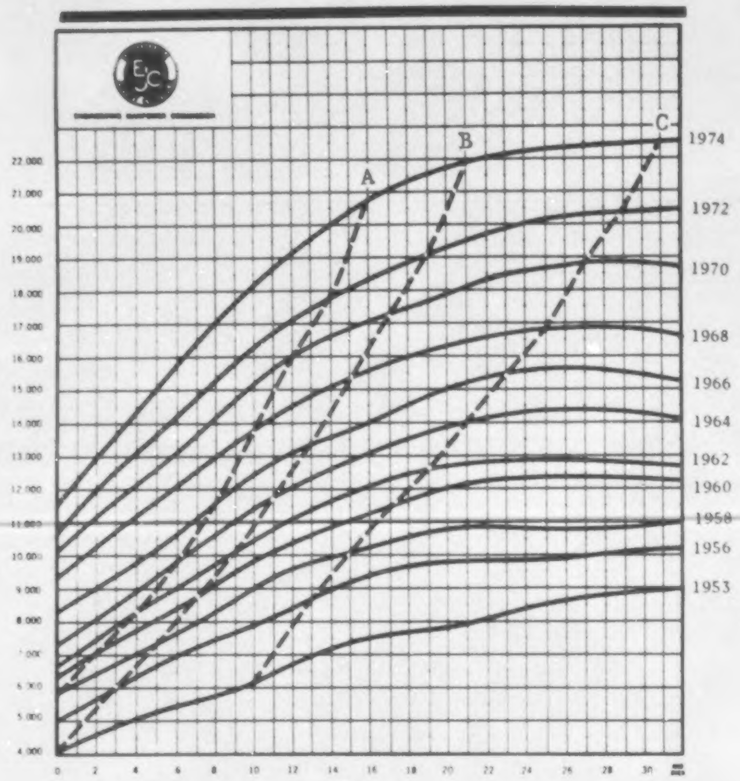
GEOGRAPHICAL REGION	MEDIAN SALARY
New England	$18,400
South Central	18,450
South Atlantic	18,600
West North Central	18,950
Mountain	19,600
Pacific	19,700
Middle Atlantic	20,000
East North Central	22,450

SOURCE: Engineering Manpower Commission, Professional Income of Engineers, 1974

TABLE 68 - NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS IN INDUSTRY BY HIGHEST DEGREE HELD AND YEARS SINCE BACCALAUREATE, 1974 (WEIGHTED NATIONAL AVERAGE)

HIGHEST DEGREE HELD	YEARS SINCE BACCALAUREATE								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
Bachelor's	(14,825) $12,150	(16,679) $14,900	(12,616) $16,150	(34,907) $17,850	(31,547) $20,300	(26,502) $21,050	(33,392) $21,500	(19,678) $22,000	(22,839) $22,200
Master's	(970) 13,400	(2,990) 15,750	(3,500) 17,000	(10,655) 18,800	(7,786) 22,000	(5,479) 23,150	(5,556) 24,050	(3,227) 24,850	(2,902) 24,550
Ph.D.'s	(45) 15,600	(284) 18,050	(580) 19,300	(3,193) 21,200	(2,182) 24,600	(1,464) 25,950	(1,149) 27,000	(638) 28,050	(789) 27,550
All Respondents	(15,844) 12,250	(19,960) 15,100	(16,697) 16,450	(48,766) 18,250	(41,529) 20,800	(33,458) 21,550	(40,111) 22,000	(23,550) 22,450	(26,542) 22,600

CHART 9 - TRENDS IN MEDIAN SALARIES OF ENGINEERS, 1953-1974



SOURCE: Engineering Manpower Commission, Professional Income of Engineers, 1974

TABLE 69 - NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY GEOGRAPHIC AREA AND SELECTED YEARS SINCE BACCALAUREATE, 1974

Geographic Area	YEARS SINCE BACCALAUREATE								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
New England	(488) $12,900	(397) $15,450	(338) $16,650	(900) $18,350	(714) $20,800	(551) $21,550	(664) $22,000	(414) $22,300	(613) $22,150
Middle Atlantic	(788) 12,150	(1,082) 15,700	(921) 17,350	(2,647) 19,450	(2,257) 22,250	(1,792) 23,000	(1,907) 23,450	(1,153) 23,900	(1,413) 24,100
East North Central	(13) 13,550	(63) 16,450	(125) 17,750	(491) 19,550	(709) 22,250	(596) 23,150	(792) 23,800	(510) 24,550	(604) 24,900
West North Central	(254) 12,450	(308) 14,950	(278) 16,200	(837) 17,950	(972) 20,500	(677) 21,300	(693) 21,750	(306) 22,100	(353) 21,950
South Central	(502) 12,350	(684) 15,050	(516) 16,300	(1,127) 17,950	(1,014) 20,350	(778) 21,150	(1,102) 21,700	(645) 22,300	(734) 22,500
South Atlantic	(529) 11,900	(592) 14,950	(435) 16,450	(1,304) 18,400	(1,125) 21,200	(720) 22,000	(807) 22,500	(350) 22,900	(550) 23,000
Mountain	(42) 12,100	(100) 15,150	(87) 16,600	(304) 18,450	(383) 20,700	(230) 21,200	(297) 21,450	(176) 21,400	(237) 21,200
Pacific Coast	(639) 12,600	(723) 15,200	(689) 16,500	(2,174) 18,300	(2,193) 21,050	(1,830) 21,900	(2,077) 22,400	(1,517) 22,750	(1,075) 22,600

SOURCE: American Chemical Society, 1975 Report of Chemists' Salaries and Employment Status, September 1975

TABLE 70 - 1975 MEDIAN SALARY AND 1974 INCOME OF CHEMICAL ENGINEERS BY DEGREE LEVEL AND YEARS OF EXPERIENCE

YEARS OF EXPERIENCE	1975 SALARY			1974 INCOME		
	B. S.	M. S.	PH.D.	B. S.	M. S.	PH.D.
1 or Less	$12,700	$15,000	n.a.	$ 8,500	$14,100	n.a.
2-4	13,800	16,800	$20,100	12,500	16,300	$20,000
5-9	16,100	19,200	24,500	15,400	19,000	24,000
10-14	19,400	19,600	25,000	19,000	19,200	25,300
15-19	24,500	24,200	26,400	22,500	24,000	28,000
20-24	24,600	26,200	31,200	24,600	26,200	34,000
25-29	25,000	25,100	30,300	25,100	25,600	33,100
30-34	26,400	30,000	33,000	26,400	30,000	35,000
35-39	28,000	30,000	31,000	30,000	30,300	33,500
40+	25,000	34,000	n.a.	34,000	34,000	n.a.
Overall	24,000	25,000	26,000	24,500	25,000	27,000

NOTE: For additional salary information on chemical engineers see Tables 14-18 and Table 56

62 SOURCE: National Society of Professional Engineers, *Professional Engineers' Income and Salary Survey*, 1973, pp. 54, 57

TABLE 71 - MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY TYPE OF EMPLOYMENT AND YEAR OF ENTRY INTO PROFESSION, 1973

Year of Entry	Industry	Public Utilities	Federal Gov't	State Gov't	County or Municipal Gov't	Consulting Firm	Construction-Contractor Firm	Educational Institution	Other Nonprofit Organization
1973	$10,750	$ *	$ *	$ *	$ *	$11,180	$ *	$ *	$ *
1972	11,760	11,850	10,830	11,110	*	11,340	11,830	*	*
1971	12,480	12,650	12,750	11,970	11,810	12,250	13,250	*	*
1970	13,600	13,270	13,860	12,450	12,790	13,640	14,560	*	*
1969	14,640	14,960	15,450	13,240	13,950	14,660	15,000	*	*
1968	15,250	14,730	16,200	14,270	15,000	15,090	16,500	*	*
1967	15,740	15,820	17,420	14,420	15,000	15,780	16,900	*	*
1965-66	16,840	16,470	18,120	15,790	16,670	16,710	17,940	17,570	*
1963-64	17,880	17,420	19,270	16,190	17,380	18,720	20,500	17,670	*
1961-62	19,070	18,950	20,070	17,380	18,700	20,050	22,780	18,600	*
1959-60	19,180	19,000	21,250	17,600	18,840	21,710	23,000	19,090	*
1957-58	21,230	20,540	22,200	18,660	20,210	23,380	24,750	19,820	23,100
1955-56	21,280	20,250	22,550	17,680	20,030	23,500	22,700	22,830	*
1953-54	22,250	21,910	23,000	19,210	20,190	25,330	27,900	21,300	*
1951-52	22,640	23,280	23,540	20,230	21,500	27,040	27,180	22,720	23,100
1949-50	23,290	23,270	24,680	19,940	21,860	26,410	28,500	23,760	21,830
1947-48	23,430	23,860	24,900	20,790	21,190	27,890	29,630	27,190	23,000
1945-46	24,420	25,250	25,800	19,500	17,820	28,130	30,670	26,810	*
1940-44	24,810	25,380	25,740	22,240	21,500	28,530	31,770	24,780	25,500
1935-39	25,530	25,220	25,890	20,020	21,500	27,000	29,440	25,370	*
1930-34	24,580	23,820	26,140	21,880	19,090	26,810	28,670	24,140	*
1929 and before	24,600	*	*	19,670	20,500	25,000	32,000	*	*

* Fewer than 20 cases.

TABLE 72 - MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY TYPE OF WORK AND YEAR OF ENTRY INTO PROFESSION, 1973

Year of Entry	Executive Administrative	Sales	Teaching	Design	Production, Quality Control, Maintenance	Research & Development	Construction Supervision	Consulting	Other
1973	$ *	$ *	$ *	$10,880	$ *	$ *	$ *	$ *	$ *
1972	*	*	*	11,310	12,270	11,250	11,730	11,710	11,130
1971	13,500	*	*	12,300	12,340	12,430	12,180	11,970	12,880
1970	14,290	*	*	12,970	13,470	13,250	13,450	14,280	13,880
1969	16,570	*	*	14,160	14,720	15,360	13,970	15,060	14,000
1968	16,940	*	*	14,740	15,060	14,920	15,230	15,290	14,600
1967	17,390	16,670	*	15,460	15,290	16,350	15,940	16,000	16,110
1965-66	18,120	16,570	17,600	16,240	16,530	17,160	17,040	17,320	16,420
1963-64	19,620	20,140	17,550	17,140	17,260	17,850	17,690	19,520	17,000
1961-62	21,320	20,590	19,670	17,540	17,820	19,580	18,240	20,380	18,920
1959-60	21,530	20,540	17,570	17,950	19,460	19,880	19,110	20,870	19,430
1957-58	23,350	22,670	19,700	19,400	19,550	21,350	20,110	23,090	19,430
1955-56	23,870	22,500	20,250	19,080	20,570	21,380	18,960	23,470	19,740
1953-54	24,590	24,000	18,900	19,500	20,290	22,500	21,250	24,050	19,500
1951-52	26,360	23,330	19,770	19,850	20,460	22,890	21,750	25,900	20,400
1949-50	26,290	21,380	20,500	20,710	20,410	22,610	20,950	26,020	21,080
1947-48	27,570	25,500	21,190	20,140	19,500	22,740	22,000	26,200	21,500
1945-46	27,650	25,200	*	19,960	19,750	24,220	17,670	27,640	*
1940-44	28,900	24,880	22,820	21,260	20,390	23,670	20,750	25,880	21,220
1935-39	29,110	23,100	24,000	20,220	19,720	24,140	19,420	25,850	22,500
1930-34	28,310	*	18,000	20,380	20,810	24,000	20,650	25,500	20,630
1929 and before	28,910	*	*	18,500	*	*	*	22,130	*

* Fewer than 20 cases.

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1973 pp. 21, 67

TABLE 73 - MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY FIELD OF EMPLOYMENT AND YEARS OF EXPERIENCE, 1973

FIELD OF EMPLOYMENT	Engineers With 5 Years of Experience	Engineers With 10 Years of Experience	Engineers With 20 Years of Experience
Industry	$15,250	$17,880	$22,250
Public Utilities	14,730	17,420	21,910
Federal Government	16,200	19,270	23,000
State Government	14,270	16,190	19,210
County or Municipal Government	15,000	17,380	20,190
Consulting Firm	15,090	18,720	25,330
Construction-Contractor Firm	16,500	20,500	27,900
Educational Institution	*	17,670	21,300
Other Nonprofit Organization	*	*	*

* Fewer than twenty cases.

TABLE 74 - MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY BRANCH OF ENGINEERING, 1969-1973

BRANCH OF ENGINEERING	MEDIAN INCOME 1969	MEDIAN INCOME 1971	MEDIAN INCOME 1973	PERCENT INCREASE 1969-71	PERCENT INCREASE 1971-73
Aeronautical and Aerospace	$17,670	$19,210	$21,720	9	13
Agricultural	14,700	16,600	19,980	13	20
Chemical	17,930	19,110	21,590	8	11
Civil	15,950	17,860	20,410	11	14
Electrical and Electronic	16,310	18,150	20,330	11	12
Industrial	16,700	18,520	20,800	11	12
Mechanical	16,590	17,860	20,320	8	14
Sanitary	16,690	19,110	20,630	14	11
Other	18,760	20,360	22,930	9	13

TABLE 75 - MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY LEVEL OF EDUCATION, 1969-1973

LEVEL OF EDUCATION	MEDIAN INCOME 1969	MEDIAN INCOME 1971	MEDIAN INCOME 1973	PERCENT INCREASE 1969-71	PERCENT INCREASE 1971-73
Less than Bachelor's	$15,660	$17,080	$19,770	9	16
Bachelor's Degree	16,160	17,920	20,420	11	14
Master's Degree	17,470	19,030	20,950	9	10
Doctor's Degree	21,790	22,510	24,840	3	10

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1973, pp. 53, 68

TABLE 76 - MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY BRANCH OF ENGINEERING AND YEAR OF ENTRY INTO PROFESSION, 1973

Year of Entry	Aeronautical & Aerospace	Agricultural	Chemical	Civil	Electrical & Electronic	Industrial	Mechanical	Metallurgical & Materials	Petroleum & Mining	Sanitary	Other
1973	$ *	$ *	$ *	$10,820	$ *	$ *	$ *	$ *	$ *	$ *	$ *
1972	*	*	*	11,120	11,870	*	11,460	*	*	11,670	11,720
1971	*	*	*	12,170	12,350	*	12,500	*	*	12,500	13,200
1970	*	*	*	13,260	13,740	14,000	13,440	*	*	13,440	13,000
1969	*	*	*	14,120	14,980	*	14,390	*	*	14,000	15,570
1968	*	*	*	15,020	15,120	*	15,190	*	*	15,170	16,130
1967	*	*	*	15,900	15,700	15,330	16,040	*	*	15,530	17,000
1965-66	*	*	16,670	16,880	16,730	17,000	16,900	*	*	16,690	16,960
1963-64	18,140	*	17,450	17,920	18,230	17,930	17,640	*	*	18,720	19,830
[illegible]1-62	19,630	*	18,880	19,370	19,280	20,720	18,950	*	*	19,740	20,290
1959-60	19,200	*	19,930	19,900	19,570	19,980	19,400	*	19,250	21,820	21,820
1957-58	23,550	*	23,250	21,020	20,880	22,070	21,120	*	*	22,250	22,370
1955-56	21,820	*	19,930	21,300	21,000	22,310	21,560	*	22,130	22,200	23,290
1953-54	22,500	*	22,500	22,670	22,450	23,700	22,270	*	22,000	23,170	22,020
1951-52	22,620	21,250	22,000	23,960	22,850	24,580	22,680	*	24,750	24,500	25,580
1949-50	22,170	22,690	23,040	24,430	22,910	23,460	23,570	*	26,250	25,250	25,710
1947-48	24,220	24,000	25,310	24,530	23,500	23,700	23,680	23,500	27,000	26,750	27,070
1945-46	*	*	*	24,400	26,290	24,750	24,520	*	*	25,200	27,140
1940-44	26,250	*	26,910	25,230	25,310	24,640	24,740	23,750	27 960	28,880	27,420
1935-39	23,250	*	26,400	24,900	24,960	25,250	25,000	*	27,000	26,200	27,550
1930-34	*	*	28,170	24,330	23,250	26,250	24,240	*	*	24,860	26,330
1929 and before	*	*	*	23,130	26,250	*	20,590	*	*	*	24,000

* Fewer than 20 cases.

TABLE 77 - MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY REGION, 1969-1973

REGION	MEDIAN INCOME 1969	MEDIAN INCOME 1971	MEDIAN INCOME 1973	PERCENT INCREASE 1969-71	PERCENT INCREASE 1971-73
1 New England and Middle Atlantic	$18,010	$19,750	$22,530	10	14
2 South [a]	16,660	18,310	21,290	10	16
3 Midwest	16,040	17,880	20,090	11	12
4 Plains	15,080	16,810	18,990	11	13
5 Southwest [b]	15,730	17,330	19,730	10	14
6 West [c]	16,630	18,460	20,750	11	12

[a] Includes Puerto Rico.
[b] Includes Canal Zone.
[c] Includes Alaska and Hawaii.

TABLE 78 - MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY FIELD OF EMPLOYMENT, 1969-1973

FIELD OF EMPLOYMENT	MEDIAN INCOME 1969	MEDIAN INCOME 1971	MEDIAN INCOME 1973	PERCENT INCREASE 1969-71	PERCENT INCREASE 1971-73
Industry	$16,440	$17,870	$20,330	9	14
Public Utilities	15,300	17,410	19,780	14	14
Federal Government	16,730	19,180	21,930	15	14
State Government	14,580	16,120	18,130	11	12
County or Municipal Government	15,280	16,960	18,990	11	12
Consulting Firm	17,890	19,260	22,010	8	14
Construction-Contractor Firm	19,000	21,040	24,220	11	15
Educational Institution	18,010	19,560	22,070	9	13

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1973, pp. 52, 68

TABLE 79 - MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY TYPE OF WORK PERFORMED, 1969-1973

TYPE OF WORK	MEDIAN INCOME			PERCENT INCREASE	
	1969	1971	1973	1969-71	1971-73
Executive-Administrative	$19,780	$21,540	$25,220	9	17
Sales	15,880	17,490	21,020	10	20
Teaching	16,260	17,610	19,940	8	13
Design	14,240	15,580	17,290	9	11
Production, Quality Control, Maintenance, etc.	14,320	15,650	17,780	9	14
Research and Development	15,780	17,520	20,210	11	15
Construction Supervision	14,720	16,130	18,070	10	12
Consulting	18,260	19,700	22,180	8	13
Other	15,500	17,060	18,310	10	7

TABLE 80 - MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY LEVEL OF EDUCATION AND YEAR OF ENTRY INTO PROFESSION, 1973

YEAR OF ENTRY	LESS THAN BACHELOR'S DEGREE	BACHELOR'S DEGREE	MASTER'S DEGREE	DOCTOR'S DEGREE
1973	$ *	$10,800	$ *	$ *
1972	*	11,420	13,000	*
1971	*	12,230	13,180	*
1970	*	13,330	13,970	*
1969	*	14,240	15,110	*
1968	15,670	14,930	15,740	*
1967	16,000	15,680	16,160	*
1965-66	16,500	16,650	17,190	18,600
1963-64	17,140	17,690	18,800	19,250
1961-62	18,170	19,200	19,710	21,670
1959-60	18,340	19,630	20,460	22,080
1957-58	20,420	21,170	21,660	23,820
1955-56	20,650	21,130	22,060	24,100
1953-54	19,960	22,160	23,910	25,750
1951-52	20,460	23,250	24,440	27,000
1949-50	20,640	23,670	24,670	27,000
1947-48	21,130	24,340	25,100	29,680
1945-46	20,920	25,590	26,310	28,500
1940-44	23,450	25,330	25,700	29,030
1935-39	21,560	25,310	26,370	28,910
1930-34	22,290	23,960	25,970	29,670
1929 and before	21,000	23,740	22,690	26,520

* Fewer than 20 cases.

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1973, pp. 55. 68

TABLE 81 - MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY EMPLOYMENT STATUS AND YEAR OF ENTRY INTO PROFESSION, 1973

YEAR OF ENTRY	SELF-EMPLOYED	EMPLOYED
1973	$ *	$10,950
1972	*	11,510
1971	*	12,370
1970	*	13,460
1969	18,000	14,500
1968	17,200	15,100
1967	19,250	15,850
1965-66	21,600	16,760
1963-64	23,650	17,890
1961-62	26,140	19,040
1959-60	27,320	19,470
1957-58	27,860	20,810
1955-56	28,620	20,810
1953-54	28,590	21,740
1951-52	29,460	22,510
1949-50	31,070	22,880
1947-48	31,520	23,430
1945-46	33,330	23,890
1940-44	35,580	24,540
1935-39	32,350	24,530
1930-34	29,300	23,670
1929 and before	28,150	21,460

* Fewer than 20 cases.

SOURCE: American Society of Civil Engineers, ASCE 1973 Salary Survey

TABLE 82 - AVERAGE OF MEDIAN ENTRANCE RATES FOR ALL GRADES OF CIVIL ENGINEERS BY CLASS OF EMPLOYMENT, 1971 AND 1973

CLASS OF EMPLOYMENT	Average of Median Entrance Rates-All Grades		
	1971	1973	% Change 1971-73
Consulting Firms	$14,896	$16,067	+ 7.9
Construction Firms	16,462	17,183	+ 4.4
State Dept. and Agencies (Transportation, Highway, Public Works, etc.)	13,824	15,375	+11.2
Municipalities, Counties, and Regional Authorities	13,604	15,295	+12.4
Railroads, Utilities & Industry	16,410	17,344	+ 5.7

SOURCE: American Society of Civil Engineers, ASCE 1973 Salary Survey

TABLE 83 - MEDIAN ENTRANCE AND MAXIMUM SALARIES FOR ALL GRADES* OF CIVIL ENGINEERS BY CLASS OF EMPLOYMENT AND GEOGRAPHICAL REGION, 1973

CLASS OF EMPLOYMENT	GEOGRAPHICAL REGION					
	New England	Middle Atlantic	Middle West	South	West	Far West
CONSULTANTS						
Entrance	$13,000	$14,560	$15,000	$14,000	$13,000	$15,500
Maximum	16,000	18,000	18,000	16,078	16,000	18,000
CONTRACTORS						
Entrance	16,000	18,000	16,200	15,000	15,700	16,900
Maximum	18,000	21,000	20,000	19,140	20,400	21,000
STATE DEPARTMENTS AND AGENCIES (TRANSPORTATION, HIGHWAY, PUBLIC WORKS)						
Entrance	13,426	16,799	15,432	13,860	14,220	15,120
Maximum	17,443	20,433	20,400	17,912	19,056	19,080
MUNICIPALITIES, COUNTIES, AND REGIONAL AUTHORITIES						
Entrance	11,100	15,262	14,412	13,260	12,509	15,048
Maximum	14,664	18,892	18,000	17,346	15,400	18,061
RAILROADS, UTILITIES AND INDUSTRIES						
Entrance	14,000	12,000	15,184	15,000	15,000	16,116
Maximum	16,000	15,340	21,840	19,900	19,080	21,684
EDUCATION						
Entrance	-	17,140	17,000	12,500	15,400	13,000
Maximum	-	22,800	24,000	15,000	19,500	15,000
TOTALS						
Entrance	13,000	15,000	15,000	13,891	13,248	15,324
Maximum	16,000	18,500	18,504	17,400	17,000	18,400

*ASCE Grade Classification Series comprises nine professional grades, which are based grade for grade on the requirements for the U.S. Civil Service Commission professional grade series, identified as GS-5, 7, 9, 11, 12, 13, 14, 15, and 16 respectively.

SOURCE: American Society of Civil Engineers, ASCE 1973 Salary Survey

TABLE 84 - MEDIAN SALARIES FOR ALL GRADES* OF CIVIL ENGINEERS BY CLASS OF EMPLOYMENT AND GEOGRAPHICAL REGION, 1973

CLASS OF EMPLOYMENT	GEOGRAPHICAL REGION					
	New England	Middle Atlantic	Middle West	South	West	Far West
Federal Government	$19,000	$21,960	$19,300	$19,040	$19,000	$18,511
State Highway Departments	14,300	15,800	15,000	14,556	14,650	16,860
State Government	14,000	18,000	17,000	16,000	16,000	18,500
County, Munic. Government	16,500	17,500	17,400	15,400	14,500	18,720
Other Government	17,200	21,000	18,000	17,100	19,848	19,000
Consulting Engineering	16,800	18,000	17,000	16,800	16,000	19,000
Construction	18,500	20,000	18,000	18,000	17,500	19,300
Railroads, Utilities	16,000	18,700	17,300	15,000	15,600	18,900
Education	16,250	19,500	18,500	18,000	18,300	17,500
Industry	17,000	19,900	18,000	16,500	18,000	19,000
Other Categories	17,000	20,000	18,000	15,600	17,500	18,000
Totals	16,800	19,000	17,560	17,150	17,220	18,500

* See Footnote on Table 83

TABLE 85 - AVERAGE TOTAL COMPENSATION OF CIVIL ENGINEERS INCLUDING FRINGE BENEFITS BY ASCE GRADES, EQUIVALENT FEDERAL GRADES AND CLASS OF EMPLOYMENT, 1973

CLASS OF EMPLOYMENT	ASCE GRADES AND EQUIVALENT FEDERAL GS GRADES								
	GS-5 I	GS-7 II	GS-9 III	GS-11 IV	GS-12 V	GS-13 VI	GS-14 VII	GS-15 VIII	GS-16 IX
Consultants	$12,187	$13,913	$15,586	$18,022	$20,347	$23,114	$26,525	$25,823	$40,191
Contractors	12,609	14,356	16,157	19,713	21,183	22,187	27,854	30,331	39,416
State Departments & Agencies (Transportation, Highway, Public Works, etc.)	14,059	15,755	16,763	19,116	21,850	24,013	26,226	29,363	33,033
Municipalities, Counties, and Regional Authorities	14,785	16,074	16,981	19,388	20,904	23,209	25,306	27,459	32,529
Railroads, Utilities & Industries	14,800	17,134	17,052	19,885	21,936	25,240	27,609	35,971	40,979
Education	21,898	22,252	22,600	19,280	19,615	24,725	26,871	30,202	31,724

SOURCE: The Institute of Electrical and Electronics Engineers, IEEE 1975 U. S. Membership Salary Fringe Benefits and Opinion Survey, July 1975

TABLE 86 - NUMBER AND MEAN SALARY OF FULL-TIME IEEE MEMBERS EMPLOYED IN THEIR AREA OF PRIMARY TECHNICAL COMPETENCE BY PRIMARY END PRODUCT OR FUNCTION OF PLANT OR INSTITUTION, 1975

Primary End Product or Function of Plant or Institution	Number of Respondents	Salary
Power Production, etc.	3,940	$21,960
Government Agency and Military	3,653	23,600
Aircraft, Missiles, etc.	3,488	23,660
Communications Systems or Equivalent	3,155	24,510
Power Generation, etc.	2,280	23,840
Independent Research, etc.	2,103	25,210
School, University, or Library	2,098	21,860
Industrial Controls, etc.	1,699	22,460
Components or Sub-Assemblies	1,531	24,790
Industrial Companies, etc.	1,480	23,890

TABLE 87 - NUMBER AND MEAN SALARY OF FULL-TIME EMPLOYED IEEE MEMBERS BY AREA OF PRIMARY TECHNICAL COMPETENCE, 1975

Primary Technical Competence	Number of Respondents	Salary
Engineering Management	4,977	$29,410
Power Engineering Society	4,914	21,570
Aerospace and Electronic Systems	4,280	24,270
Computers	4,150	22,370
Communications	3,619	24,740
Circuits and Systems	2,713	20,720
Industry Applications	2,244	22,350
Control Systems	1,372	21,510
Instrumentation and Measurement	1,350	22,290
Electron Devices	1,318	25,860

SOURCE: The Institute of Electrical and Electronics Engineers, IEEE 1975 U. S. Membership Salary Fringe Benefits and Opinion Survey, July 1975

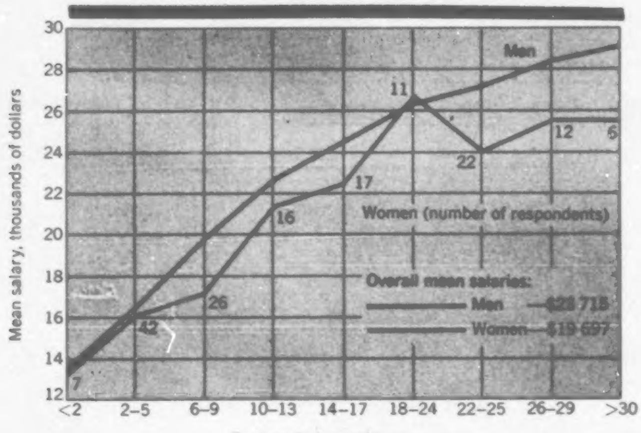
TABLE 88 - NUMBER AND MEAN SALARY OF FULL TIME IEEE MEMBERS EMPLOYED IN THEIR AREA OF PRIMARY TECHNICAL COMPETENCE BY INDUSTRY OR SERVICE OF EMPLOYER, 1975

INDUSTRY OR SERVICE OF EMPLOYER	Number of Respondents	Salary
Federal Government	4,213	$23,770
Electrical Computing Equipment	3,502	24,030
Electrical Companies and Systems	3,336	22,310
Consulting Engineers	2,215	25,400
Communications Companies	1,910	24,600
Nonprofit Education and Research	1,824	23,620
Electrical Machinery Equipment and Supplies	1,742	25,390
Misc. Manufacturing Industries	1,509	23,800
Aircraft	1,487	22,980
Other Not Listed	2,179	24,040

TABLE 89 - NUMBER AND MEAN SALARY OF IEEE MEMBERS BY RACIAL ORIGIN, 1975

RACIAL ORIGIN	Number of Respondents	Salary
Caucasian	33,983	$23,795
Black	141	22,566
American Indian	22	22,522
Oriental	911	21,661
Spanish Surnamed	189	21,378

CHART 10 - SALARY VERSUS ENGINEERING EXPERIENCE OF IEEE MEMBERS BY SEX, 1975



SOURCE: American Institute of Industrial Engineers, Inc., Compensation of Industrial Engineers, August 1975

TABLE 90 - NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY TYPE OF EMPLOYER, 1974-1975

TYPE OF EMPLOYER	Total Employees	Median Income	Mean Income
Food and Kindred Products	199	$19,000	$20,929
Textile Mill Products	94	18,000	19,843
Apparel and Other Textile Products	115	17,501	21,685
Paper and Allied Products	152	18,200	19,909
Printing and Publishing	90	20,001	21,134
Chemical and Allied Products	278	21,000	22,484
Rubber and Misc. Plastics Products	146	16,501	17,949
Stone, Clay and Glass Products	107	18,000	19,820
Primary Metal Industries	332	20,000	21,898
Fabricated Metal Products	670	18,200	20,084
Machinery (Except Electrical)	214	19,500	21,642
Electrical and Electronic Equipment	699	19,000	20,591
Transportation Equipment	216	18,800	20,522
Other Manufacturing Industries	601	18,600	21,131
Banks and Finance Organizations	70	17,864	20,383
Colleges and Universities	319	23,000	24,288
Consulting Organizations	287	27,000	30,189
Governmental Organizations	578	22,000	22,395
Hospitals and Health Organizations	214	18,001	19,240
Merchandising (Wholesale and Retail)	76	23,416	26,274
Public Utilities (Electric, Gas, Pipelines, and Sanitary Services)	65	20,001	21,427
Transportation (Air, Rail, Truck and Water) and Warehousing	137	21,000	23,064
Other Non-Manufacturing Industries	236	20,200	22,571

72 SOURCE: American Institute of Industrial Engineers, Inc., Compensation of Industrial Engineers, August 1975

TABLE 91 - NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY DEGREE LEVEL, 1974-1975

DEGREE LEVEL	Total Employees	Median Income	Mean Income
Ph.D.	306	$24,000	$25,508
MA/ME/MS	1,093	21,388	23,263
MBA	614	22,000	24,589
Bachelor's (Engineering)	2,317	19,000	21,150
Bachelor's (Non-Engineering)	835	18,501	20,292
Less Than Bachelor's Degree	711	17,900	18,936

TABLE 92 - NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY YEARS OF EXPERIENCE, 1974-1975

YEARS OF EXPERIENCE	Total Employees	Median Income	Mean Income
Under 2 Years	308	$12,760	$13,201
2-4 Years	754	14,300	15,165
5-9 Years	1,216	18,000	18,534
10-14 Years	1,066	20,800	21,977
15-19 Years	902	22,801	24,614
20-24 Years	854	24,000	25,711
25-29 Years	484	25,000	26,907
30 Years and Over	302	25,000	30,404

TABLE 93 - NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY GEOGRAPHIC AREA, 1974-1975

GEOGRAPHIC AREA	Total Employees	Median Income	Mean Income
Northeastern States	1,345	$20,200	$23,281
Southern States	1,255	19,500	20,976
Midwestern States	1,254	19,801	21,413
Southwestern States	403	19,500	21,907
Plains States	358	19,466	20,389
Mountain States	188	19,418	20,787
Pacific States	654	21,500	22,543
Canada	400	18,000	19,713

SOURCE: American Society for Metals, 1973 Salary and Fringe Benefit Survey, May 1974

TABLE 94 - MEDIAN ANNUAL SALARIES OF ASM* MEMBERS AND OF METALLURGICAL AND MATERIALS ENGINEERS BY GEOGRAPHIC REGION, 1973

GEOGRAPHIC REGION	ALL ASM MEMBERS	METALLURGICAL AND MATERIALS ENGINEERS
Pacific	$19,100	$19,100
Mountain	19,000	19,250
West North Central	18,200	18,200
West South Central	18,240	18,425
East North Central	18,000	18,000
East South Central	18,000	18,000
South Atlantic	19,500	18,000
Middle Atlantic	19,668	19,200
New England	19,000	19,584

TABLE 95 - MEDIAN ANNUAL SALARIES OF ASM* MEMBERS AND OF METALLURGICAL AND MATERIALS ENGINEERS BY PRIMARY TECHNICAL INVOLVEMENT, 1973

PRIMARY TECHNICAL INVOLVEMENT	ASM MEMBERS		METALLURGICAL AND MATERIALS ENGINEERS	
	% of Responses	Salary	% of Responses	Salary
Materials Testing and Quality Control	14.5	$15,780	15.2	$16,300
Materials System & Design	8.3	18,800	9.6	19,500
Materials Science	12.3	19,717	17.7	19,500
Heat Treating	3.5	16,463	2.3	16,000
Technical Management	19.5	22,530	17.4	22,000
Metals Production	5.9	18,100	6.6	16,800
Materials Forming	2.8	17,700	2.9	17,700
Welding and Joining	4.0	18,500	4.6	17,166
Casting Processes and Foundry Technology	4.7	18,000	4.3	16,808
Education and Training	3.5	19,000	3.8	20,000
Other	17.1	18,700	14.1	18,500

*American Society of Metals (includes individual executives and engineers within the broad metals industry)

SOURCE: American Society for Metals, 1973 Salary and Fringe Benefit Survey, May 1974

TABLE 96 - MEDIAN ANNUAL SALARIES OF ASM* MEMBERS AND OF METALLURGICAL AND MATERIALS ENGINEERS BY INDUSTRIAL GROUPING, 1973

INDUSTRIAL GROUPING	ALL ASM MEMBERS	METALLURGICAL AND MATERIALS ENGINEERS
Primary Metal Production	$18,500	$17,862
Fabricated Metal Products	18,000	17,500
Transportation Equipment	18,792	19,100
Electrical & Electronic Machinery	19,758	19,758
Machinery, Except Electrical	17,226	17,000
All Other Manufacturing	19,000	18,900
All Other	20,000	20,000

TABLE 97 - MEDIAN ANNUAL SALARIES OF ASM* MEMBERS BY CURRICULUM OF HIGHEST DEGREE, 1973

CURRICULUM OF HIGHEST DEGREE	% of Responses	Salary
Metallurgical Engineering	48.2	$19,000
Materials Science	5.3	19,000
Mechanical Engineering	10.1	19,500
Industrial Engineering	2.5	20,000
Chemical Engineering	4.9	21,000
Chemistry	5.5	20,000
Other	12.0	19,000

* American Society of Metals (includes individual executives and engineers within the broad metals industry)

SOURCE: Engineering Manpower Commission, Salaries of Engineering Technicians, 1973

TABLE 98 - NUMBER AND MEDIAN SALARIES OF ENGINEERING TECHNICIANS BY TYPE OF EMPLOYMENT AND SELECTED YEARS SINCE GRADUATION, 1973

TYPE OF EMPLOYMENT	YEARS SINCE GRADUATION - BASE YEAR 1973								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
All Industry	(787) $8,600	(1,571) $ 9,900	(1,579) $10,450	(3,971) $11,200	(3,024) $12,150	(2,632) $12,400	(2,530) $12,500	(2,059) $12,500	(2,789) $12,350
All Manufacturing Industry	(429) 8,500	(904) 9,700	(980) 10,250	(2,514) 10,950	(1,987) 11,950	(1,718) 12,200	(1,588) 12,300	(1,316) 12,250	(1,598) 11,900
All Non-Mfg. Industry	(358) 8,600	(667) 10,350	(599) 11,000	(1,457) 11,700	(1,037) 12,450	(914) 12,650	(942) 12,750	(743) 12,850	(1,191) 12,850
Educational	(62) 8,350	(52) 9,350	(50) 9,750	(44) 10,150	(37) 10,550	(48) 10,600	(48) 10,550	(50) 10,400	(131) 10,200
Federal Government	(84) 7,300	(120) 8,950	(140) 9,750	(317) 10,900	(330) 12,700	(337) 13,250	(391) 13,650	(339) 13,900	(445) 13,800
State Government	(377) 6,750	(598) 8,400	(624) 9,150	(1,766) 9,950	(1,384) 10,650	(1,110) 10,700	(772) 10,650	(558) 10,450	(1,053) 10,350
Local Government	(22) 7,200	(21) 8,800	(27) 9,450	(47) 10,350	(45) 11,500	(26) 11,850	(28) 12,050	(35) 12,300	(66) 12,350
Non-Gov't. R & D	(102) 9,250	(278) 10,650	(201) 11,250	(475) 11,950	(377) 12,750	(365) 12,800	(434) 12,750	(291) 12,400	(641) 11,800
Engineering Architectural Consulting	(116) 7,500	(126) 8,900	(88) 9,600	(258) 10,500	(169) 11,850	(153) 12,250	(109) 12,400	(98) 12,400	(146) 11,950
Industrial R & D	(73) 9,400	(188) 11,300	(115) 11,950	(205) 12,650	(144) 13,350	(127) 13,500	(164) 13,600	(111) 13,650	(184) 13,650
Chemical and Petroleum Industry	(27) 8,650	(74) 9,450	(52) 9,800	(112) 10,350	(65) 11,200	(73) 11,550	(84) 11,850	(105) 12,250	(120) 12,550
Electric Utilities	(116) 9,500	(250) 10,600	(271) 11,100	(568) 11,800	(369) 12,950	(303) 13,350	(308) 13,700	(275) 14,200	(304) 14,500
R & D Laboratories	(50) 8,450	(117) 9,800	(123) 10,400	(346) 11,200	(281) 12,250	(281) 12,450	(305) 12,450	(202) 12,100	(494) 11,150
Technical Services	(22) 8,500	(26) 9,300	(28) 9,700	(104) 10,250	(84) 11,200	(51) 11,600	(62) 11,950	(46) 12,450	(37) 12,900
Transportation Services	(2) -	(5) 10,850	(5) 11,100	(21) 11,500	(11) 12,250	(10) 12,550	(8) 12,800	(17) 13,100	(32) 13,000
Gas Utilities & Pipelines	(1) -	(4) -	(8) 9,600	(26) 10,100	(23) 11,000	(23) 11,450	(30) 11,850	(24) 12,450	(37) 12,700
Construction & Mining	(13) 7,900	(26) 9,050	(37) 9,600	(76) 10,500	(61) 12,200	(58) 12,900	(41) 13,450	(33) 14,000	(46) 13,200
Electrical & Electronic Products	(242) 9,400	(560) 10,550	(504) 11,050	(1,329) 11,800	(1,031) 12,950	(895) 13,350	(838) 13,550	(620) 13,700	(549) 13,350
Metal Products	(60) 8,400	(162) 9,950	(209) 10,600	(497) 11,400	(356) 12,450	(311) 12,750	(268) 12,950	(233) 13,100	(470) 13,150
Machinery	(25) 7,750	(33) 8,850	(32) 9,350	(118) 10,000	(97) 10,850	(74) 11,100	(64) 11,150	(54) 11,050	(65) 10,600
Instruments	(11) 8,250	(41) 9,150	(29) 9,450	(61) 9,850	(32) 10,200	(17) 10,250	(20) 10,200	(21) 10,100	(28) 9,950
Aerospace	(77) 7,450	(138) 8,700	(190) 9,250	(559) 10,000	(554) 11,000	(600) 11,200	(603) 11,300	(436) 11,150	(666) 10,800
All Mechanical Products	(219) 7,800	(410) 9,200	(500) 9,800	(1,215) 10,500	(978) 11,350	(828) 11,550	(780) 11,600	(661) 11,550	(1,061) 11,400

SOURCE: Engineering Manpower Commission, Salaries of Engineering Technicians, 1973

TABLE 99 - NUMBER AND MEDIAN SALARIES OF ENGINEERING TECHNICIANS BY GEOGRAPHIC AREA AND SELECTED YEARS SINCE GRADUATION, 1973 (ALL INDUSTRY)

GEOGRAPHIC AREA	YEARS SINCE GRADUATION - BASE YEAR 1973							
	1	5	9-11	15-17	18-20	21-23	27-29	35+
Northeast	(190) $8,050	(308) $9,250	(980) $10,400	(696) $11,250	(623) $11,500	(560) $11,700	(500) $11,900	(635) $11,950
North Central	(199) 8,100	(390) 9,400	(920) 10,850	(615) 12,100	(530) 12,450	(548) 12,550	(521) 12,400	(927) 11,700
South	(92) 8,500	(255) 9,550	(675) 10,600	(458) 11,450	(408) 11,700	(359) 11,900	(279) 12,100	(435) 12,200
West	(125) 7,750	(182) 9,100	(502) 10,650	(515) 11,800	(426) 12,100	(449) 12,200	(320) 12,050	(442) 11,500

TABLE 100 - NUMBER AND MEDIAN SALARIES OF BACHELOR OF TECHNOLOGY RECIPIENTS BY TYPE OF EMPLOYMENT AND SELECTED YEARS SINCE GRADUATION, 1973

TYPE OF EMPLOYMENT	YEAR SINCE GRADUATION-BASE YEAR 1973							
	1	5	9-11	15-17	18-20	21-23	27-29	35+
All Industry	(186) $ 9,700	(71) $11,150	(78) $12,450	(37) $13,150	(34) $13,250	(35) $13,200	(17) $13,050	(43) $12,850
All Manufacturing Industry	(116) 9,500	(35) 10,900	(42) 12,400	(23) 13,450	(21) 13,650	(18) 13,750	(9) 13,650	(26) 13,350
All Non-Mfg. Industry	(70) 10,250	(36) 11,550	(36) 12,550	(14) 12,650	(13) 12,400	(17) 12,000	(8) 11,150	(17) 10,150
All Government	(7) 12,250	(11) 8,150	(24) 8,850	(11) 11,250	(11) 12,250	(14) 14,000	(12) 13,350	(10) 11,650

FEDERAL SALARIES

On October 1, 1975, federal workers, including cabinet members, federal judges, members of Congress, top government officials and the military, received a 5% pay increase, despite a recommendation by a federal panel that salaries for civil servants be increased 8.66% to keep them comparable to those in private industry. Table 101 presents the current salaries for federal workers by grade and step level.

Tables 102 through 105 present the median grade and average salary of federal white collar workers by sex in all areas as of October 1974. Women continue to be paid at a lower rate than men in almost all the occupational series listed. Even in the secretary category (where the bulk of female employees working for the federal government are concentrated), men earn more than women - $10,971 to $10,634 respectively.

Among the engineering specialties, nuclear engineers had the highest average salary - $25,568, followed by those in the general engineering category at $25,541 and aerospace engineers at $25,100 (Table 102).

Tables 106 and 107 present a comparison of salaries of federal workers with those of workers in private industry. The Bureau of Labor Statistics reports that average salaries of white collar workers in the private sector climbed 9.0% during the year ended March, 1975. This was the largest annual increase recorded in the 15-year series. For clerical jobs, increases averaged 9.6%; for professional, administrative, and technical occupations, 8.3%. During the same period, the Consumer Price Index advanced 10.3%.

Table 108 shows average, lowest and top pay scales for selected federal occupations by grade level as of October 1, 1975.

SOURCE: U.S. Civil Service Commission

TABLE 101 - ANNUAL SALARIES OF FEDERAL WORKERS UNDER THE GENERAL SCHEDULE BY GRADE AND STEP LEVELS, OCTOBER 1975

	1	2	3	4	5	6	7	8	9	10
GS- 1	$ 5,559	$ 5,744	$ 5,929	$ 6,114	$ 6,299	$ 6,484	$ 6,669	$ 6,854	$ 7,039	$ 7,224
2	6,296	6,506	6,716	6,926	7,136	7,346	7,556	7,766	7,976	8,186
3	7,102	7,339	7,576	7,813	8,050	8,287	8,524	8,761	8,998	9,235
4	7,976	8,242	8,508	8,774	9,040	9,306	9,572	9,838	10,104	10,370
5	8,925	9,223	9,521	9,819	10,117	10,415	10,713	11,011	11,309	11,607
6	9,946	10,278	10,610	10,942	11,274	11,606	11,938	12,270	12,602	12,934
7	11,046	11,414	11,782	12,150	12,518	12,886	13,254	13,622	13,990	14,358
8	12,222	12,629	13,036	13,443	13,850	14,257	14,664	15,071	15,478	15,885
9	13,482	13,931	14,380	14,829	15,278	15,727	16,176	16,625	17,074	17,523
10	14,824	15,318	15,812	16,306	16,800	17,294	17,788	18,282	18,776	19,270
11	16,255	16,797	17,339	17,881	18,423	18,965	19,507	20,049	20,591	21,133
12	19,386	20,032	20,678	21,324	21,970	22,616	23,262	23,908	24,554	25,200
13	22,906	23,670	24,434	25,198	25,962	26,726	27,490	28,254	29,018	29,732
14	26,861	27,756	28,651	29,546	30,441	31,336	32,231	33,126	34,021	34,916
15	31,309	32,353	33,397	34,441	35,485	36,529	37,573	38,617*	39,661*	40,705*
16	36,338	37,549	38,760*	39,971*	41,182*	42,393*	43,604*	44,815*	46,026*	
17	42,066*	43,468*	44,870*	46,272*	47,674*					
18	48,654*									

* The rate of basic pay for employees at these rates would be limited by section 5308 of title 5 of the United States Code to the rate for level V of the Executive Schedule (as of the effective date of this schedule, $37,800).

SOURCE: U.S. Civil Service Commission, Unpublished Data, October 31, 1973 and October 31, 1974

TABLE 102 - NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL WHITE-COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1974

OCCUPATION SERIES AND GROUP	TOTAL			MALE			FEMALE		
	1974 Number	1973 Median Grade	1974 Average Salary*	1974 Number	1973 Median Grade	1974 Average Salary*	1974 Number	1973 Median Grade	1974 Average Salary*
General Engineering	14,807	13	$25,541	14,744	13	$25,562	63	12	$20,102
Engineering Technician	25,762	9	14,905	24,992	9	15,015	770	6	11,086
Safety Engineering	519	13	22,937	514	13	22,974	5	11	19,201
Fire Prevent Engineering	94	13	22,722	93	13	22,700	1	13	24,766
Materials Engineering	816	13	23,809	806	13	23,874	10	11	19,330
Landscape Architecture	531	12	19,722	514	12	19,784	17	11	17,550
Architecture	1,391	12	20,888	1,324	12	20,669	67	11	16,718
Construction Control	3,793	9	14,206	3,785	9	14,211	8	7	11,990
Civil Engineering	14,366	12	20,985	14,294	12	21,006	72	11	16,854
Surveying Technician	2,666	5	9,663	2,606	5	9,688	60	2	6,840
Engineering Drafting	2,541	6	10,400	2,210	6	10,441	331	5	10,107
Sanitary Engineering	1,030	12	22,089	1,023	12	22,105	7	11	18,056
Construction Analyst	1,119	11	18,400	1,094	11	18,496	25	9	14,555
Mechanical Engineering	9,972	12	20,957	9,930	12	20,969	42	11	17,237
Nuclear Engineering	1,957	13	25,568	1,947	13	25,624	10	11	18,031
Electrical Engineering	4,331	12	20,295	4,313	12	20,309	18	11	16,286
Electronics Engineering	18,434	12	22,678	18,323	12	22,691	111	12	19,683
Electronics Technicians	23,707	11	17,512	23,622	11	17,530	85	7	12,419
Aerospace Engineering	8,744	13	25,100	8,657	13	25,136	87	12	20,873
Naval Architecture	1,001	13	22,925	995	13	22,953	6	12	19,719
Mining Engineering	520	12	22,969	520	12	22,969	-	-	-
Petroleum Engineering	276	12	22,270	276	12	22,270	-	-	-
Agricultural Engineering	451	11	19,191	450	11	19,201	1	9	14,559
Ceramic Engineering	50	13	22,714	49	13	23,040	1	5	13,765
Chemical Engineering	1,405	12	21,352	1,387	12	21,398	18	11	18,072
Welding Engineering	78	12	20,964	78	12	20,964	-	-	-
Industrial Engr. Tech.	2,842	9	15,452	2,763	9	15,488	79	9	13,988
Industrial Engineering	2,303	12	21,259	2,285	12	21,273	18	11	17,454
Trainee, Engr. & Architecture	934	4	8,300	865	4	8,350	69	3	7,547

*1974 Average salary estimated on 1973 average salary + 5.5%.

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: U.S. Civil Service Commission, Unpublished Data, October 31, 1973 and October 31, 1974

TABLE 103 - NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL WHITE-COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1974

OCCUPATION SERIES AND GROUP	TOTAL			MALE			FEMALE		
	1974 Number	1973 Median Grade	1974 Average Salary*	1974 Number	1973 Median Grade	1974 Average Salary*	1974 Number	1973 Median Grade	1974 Average Salary*
General Physical Science	4,410	14	$27,314	4,267	14	$27,470	143	12	$21,270
Health Physics	442	13	22,351	434	13	22,457	8	11	17,521
Physics	5,523	13	23,547	5,381	13	23,638	142	12	19,878
Physical Science Tech.	3,953	7	12,178	3,214	7	12,505	739	5	10,589
Geophysics	371	12	22,943	363	12	22,974	8	11	20,443
Hydrology	1,535	12	21,454	1,521	12	21,500	14	11	15,593
Chemistry	7,799	12	20,821	6,638	12	21,452	1,161	11	17,147
Metallurgy	594	12	22,865	586	12	22,887	8	13	21,360
Astronomy and Space Sci.	603	13	26,[illegible]51	579	13	26,486	24	12	22,667
Meteorology	2,185	12	22,327	2,155	12	22,399	30	9	17,044
Meteorological Technician	2,639	10	14,916	2,449	10	15,127	190	7	12,136
Geology	1,788	12	22,742	1,680	12	22,920	108	11	19,589
Oceanography	742	12	20,813	714	12	20,932	28	11	17,215
Cartography	2,536	11	18,392	2,327	11	18,562	209	11	16,449
Cartographic Technician	3,021	9	13,394	2,404	9	13,736	617	7	12,125
Geodesy	254	12	20,390	242	12	20,460	12	11	18,966
Gen. Biological Science	3,144	12	20,817	2,686	12	21,539	458	9	16,469
Microbiology	1,512	12	20,157	1,040	12	21,385	472	11	17,268
Biological Technician	5,544	6	10,695	3,927	6	10,876	1,617	5	10,224
Zoology	141	13	22,763	127	13	23,348	14	11	17,918
Entomology	727	12	21,930	714	12	21,970	13	11	19,276
Botany	120	12	20,720	85	12	22,206	35	9	16,453
Plant Pathology	309	13	23,545	299	13	23,706	10	11	17,478
Plant Physiology	224	13	23,887	214	13	24,135	10	11	17,934
Horticulture	96	11	19,587	92	11	19,640	4	9	14,174
Soil Conservation	4,505	11	17,295	4,491	11	17,299	14	9	13,666
Soil Science	1,795	11	18,057	1,785	11	18,073	10	5	11,374
Agronomy	320	12	21,770	320	12	21,772	-	-	-
Agriculture	3,090	11	16,735	3,080	11	16,741	10	9	14,742
Range Conservation	636	9	16,961	635	9	16,961	1	-	-
Forestry	5,270	11	19,033	5,263	11	19,036	7	9	16,243
Fishery Biology	1,052	11	19,260	[illegible]	11	19,382	21	9	14,343
Wildlife Biology	654	11	19,179	645	11	19,206	9	7	16,467

*1974 average salary estimated on 1973 average salary + 5.5%.

NOTE: Median grade and average salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: U.S. Civil Service Commission, Unpublished Data, October 31, 1973 and October 31, 1974

TABLE 104 - NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL WHITE-COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1974

OCCUPATION SERIES AND GROUP	TOTAL			MALE			FEMALE		
	1974 Number	1973 Median Grade	1974 Average Salary*	1974 Number	1973 Median Grade	1974 Average Salary*	1974 Number	1973 Median Grade	1974 Average Salary*
Medical Officer	8,033	15	$28,703	7,202	15	$28,430	831	15	$31,585
Nurse	28,451	9	14,068	1,223	9	14,383	27,228	9	14,057
General Health Science	786	14	24,241	548	14	25,271	238	12	21,354
Medical Technologist	2,811	7	12,838	858	7	13,218	1,953	7	12,680
Medical Technician	2,899	6	10,851	1,400	6	11,029	1,499	6	10,676
Medical Radiology Tech.	2,216	6	10,931	1,441	6	11,180	775	6	10,432
Dental Officer	925	14	26,820	916	14	26,821	9	14	26,594
Dental Assistant	2,312	4	8,513	149	4	8,417	2,163	4	8,520
Dental Lab. Technician	775	8	12,569	723	8	12,653	52	7	11,374
Dietitian	1,018	9	16,488	25	11	16,872	993	9	16,478
OccupationalTherapist	566	9	14,717	67	9	15,795	499	9	14,585
Physical Therapist	682	9	14,621	298	10	15,220	384	9	14,131
Optometrist	35	11	16,664	34	11	16,643	1	11	17,613
Podiatrist	22	11	17,271	21	11	17,256	1	11	17,613
Pharmacist	1,439	11	17,190	1,263	11	17,287	176	11	16,311
Pharmacology	246	13	25,365	233	13	25,610	38	13	23,933
Physiology	333	13	23,355	289	13	23,816	44	11	20,535
Genetics	186	13	24,387	174	13	24,630	12	11	20,530
Veterinary Med. Science	2,284	12	26,113	2,238	12	26,162	46	11	23,536

*1974 average salary estimated on 1973 average salary + 5.5%.

NOTE: Median grade and average salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: U.S. Civil Service Commission, Unpublished Data, October 31, 1973 and October 31, 1974

TABLE 105 - NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL WHITE-COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1974

OCCUPATION SERIES AND GROUP	TOTAL			MALE			FEMALE		
	1974 Number	1973 Median Grade	1974 Average Salary*	1974 Number	1973 Median Grade	1974 Average Salary*	1974 Number	1973 Median Grade	1974 Average Salary*
Economics	4,742	13	$23,420	4,158	13	$23,888	584	12	$20,010
Psychology	2,612	13	23,395	2,228	13	23,721	384	12	21,319
Social Science	2,107	12	22,048	1,479	12	23,048	628	11	19,640
Social Work	2,783	11	18,650	1,535	11	19,152	1,248	11	18,042
Sociology	79	13	21,970	53	13	23,318	26	11	19,304
Foreign Affairs	2,340	13	25,002	2,074	13	25,633	266	12	19,833
International Relations	72	15	30,974	62	15	32,050	10	11	20,670
Manpower Res. & Analysis	56	13	24,899	44	14	26,139	12	12	21,050
Geography	141	12	21,000	123	12	21,720	18	11	16,714
History	404	12	21,957	333	12	22,581	71	11	18,541
General Anthropology	57	13	24,276	2	13	24,905	55	12	21,057
Archeology	80	12	20,601	32	12	20,664	48	11	17,613
Secretary	62,323	6	10,638	548	6	10,971	61,775	6	10,634
Digital Comp. Systems Adm.	1,558	13	24,821	1,417	13	25,455	141	11	18,198
Computer Operation	11,602	7	11,799	7,345	7	12,610	4,257	5	10,345
Computer Specialist	24,075	12	19,720	19,469	12	20,167	4,606	11	17,880
Computer Aid & Technician	1,686	5	10,581	806	5	11,175	880	5	10,213
Program Management	3,260	15	30,855	3,140	15	31,067	120	13	24,838
Management Analysis	9,698	11	19,777	7,713	12	20,425	1,985	11	16,952
Communications Management	1,767	12	19,936	1,672	12	20,303	95	9	14,957
Program Analysis	8,666	12	21,987	6,686	13	23,056	1,980	11	17,814
Card Punch Operator	10,932	3	7,542	506	3	7,463	10,426	3	7,546
Operations Research	2,125	13	26,157	2,016	13	26,382	109	13	21,582
Mathematics	4,135	12	26,002	3,351	12	21,116	784	11	18,436
Mathematics Technician	310	6	10,756	121	5	10,640	189	6	10,826
Mathematical Statistician	838	12	22,426	687	12	23,031	151	11	19,714
Statistician	2,186	12	22,162	1,721	13	22,902	465	12	19,232
Statistical Assistant	158	6	10,808	56	5	11,109	102	6	10,745
Actuary	93	12	22,628	83	12	23,080	10	9	19,503
Accounting	20,435	12	23,330	18,729	12	23,700	1,706	11	18,809
General Attorney	12,671	13	25,697	11,526	13	25,874	1,145	13,	23,563

*1974 Average Salary estimated on 1973 Average Salary + 5.5%.

NOTE: Median grade and average salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Federal Salaries, U.S. Civil Service Commission; Private Salaries, U.S. Department of Labor

TABLE 106 - COMPARISON OF FEDERAL AND PRIVATE AVERAGE SALARIES IN SELECTED JOBS, 1974 AND 1975

OCCUPATION	Oct. 1, 1974 Federal Salaries	Oct. 1, 1975 Federal Salaries	Salaries for Comparable Job In Industry 1974
Top career official	$36,000	$37,800	*
Engineer (near top)	33,847	35,540	$34,114
Lawyer (near top)	33,847	35,540	41,046
Chief chemist	33,847	35.540	37,855
Chief accountant	28,977	30,425	32,094
Personnel director	24,660	25,893	25,033
Accountant (experienced)	20,755	21,792	21,664
Auditor (experienced)	17,447	18,319	18,800
Buyer	17,447	18,319	18,983
Engineering Technician (exp.)	14,370	15,088	14,829
Accountant (medium experience)	14,370	15,088	14,458
Job analyst (medium experience)	11,809	12,399	12,543
Accountant (beginning)	9,649	10,131	10,891
Engineer (beginning)	9,649	10,131	12,917
Senior stenographer	8,476	8,900	8,784
Junior draftsman	8,476	8,900	8,988
General stenographer	7,247	7,643	7,801
Typist (experienced)	7,247	7,643	7,452
Accounting clerk (beginning)	7,247	7,643	7,141
Typist (beginning)	6,170	6,478	6,365
File clerk (beginning)	5,409	5,679	5,524

*Top pay varies so widely there is no "average" rate, according to the Civil Service Commission.

SOURCE: U.S. Department of Labor, National Survey of Professional, Administrative, Technical and Clerical Pay, March 1975

TABLE 107 - COMPARISON OF AVERAGE ANNUAL SALARIES IN PRIVATE INDUSTRY WITH SALARY RATES FOR FEDERAL EMPLOYEES UNDER THE GENERAL SCHEDULE, MARCH 1975

OCCUPATION	Average salaries in private industry	Grade	1	2	3	4	5	6	7	8	9	10	Average salary[1]
Accountants I	$ 9,739	GS-5	$ 8,055	$ 8,324	$ 8,593	$ 8,862	$ 9,131	$ 9,400	$ 9,669	$ 9,938	$10,207	$10,476	$ [illegible]
Chemists I	10,660												
Engineers I	11,901												
Eng. technicians III	10,491												
Drafters II	10,443												
Accountants II	11,545	GS-7	9,969	10,301	10,633	10,965	11,297	11,629	11,961	12,293	12,625	12,957	[illegible]
Chemists II	12,408												
Engineers II	13,171												
Eng. technicians IV	11,974												
Drafters III	13,070												
Accountants III	13,285	GS-9	12,167	12,573	12,979	13,385	13,791	14,197	14,603	15,009	15,415	15,821	13,736
Attorneys I	14,223												
Chemists III	14,298												
Engineers III	15,160												
Eng. technicians V	13,654												
Accountants IV	16,051	GS-11	14,671	15,160	15,649	16,138	16,627	17,116	17,605	18,094	18,583	19,072	[illegible]
Attorneys II	16,357												
Chemists IV	17,283												
Chief accountants I	17,601												
Engineers IV	17,929												
Accountants V	19,560	GS-12	17,497	18,080	18,663	19,246	19,829	20,412	20,995	21,578	22,161	22,744	[illegible]
Attorneys III	21,082												
Chemists V	20,702												
Chief accountants II	20,072												
Engineers V	20,654												
Attorneys IV	25,956	GS-13	20,677	21,366	22,055	22,744	23,433	24,122	24,811	25,500	26,189	26,878	[illegible]
Chemists VI	24,079												
Chief accountants III	23,805												
Engineers VI	23,827												
Attorneys V	31,999	GS-14	24,247	25,055	25,863	26,671	27,479	28,287	29,095	29,903	30,711	31,519	[illegible]
Chemists VII	28,203												
Chief accountants IV	29,021												
Engineers VII	26,980												
Attorneys VI	38,180	GS-15	28,263	29,205	30,147	31,089	32,031	32,973	33,915	34,857	35,799	36,741	[illegible]
Chemists VIII	34,475												
Engineers VIII	31,469												

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[1] Mean salary of all general schedule employees in each grade as of March 31, 1975.

SOURCE. U.S. Civil Service Commission

TABLE 108 - AVERAGE, LOWEST AND TOP PAY SCALES FOR SELECTED FEDERAL OCCUPATIONS BY GRADE LEVEL, OCTOBER 1, 1975

GRADE	OCCUPATION	AVERAGE PAY	LOWEST PAY	TOP PAY
1	Beginning file clerk	$ 5,679	$ 5,559	$ 7,224
2	Beginning typist	6,479	6,296	8,186
3	Beginning accounting clerk	7,609	7,102	9,235
4	Junior draftsman	8,900	7,976	10,370
5	Beginning engineer	10,131	8,925	11,607
6	Secretary	11,465	9,946	12,934
7	Experienced job analyst	12,399	11,046	14,358
8	Electronics technician	14,123	12,222	15,885
9	Experienced accountant	15,089	13,482	17,523
10	Top engineering technician	17,152	14,824	19,270
11	Buying specialist	18,319	16,255	21,133
12	Experienced auditor	21,793	19,386	25,200
13	Personnel director	25,893	22,906	29,782
14	Chief accountant	30,426	26,861	34,916
15	Chief chemist	35,539	31,309	37,800
16	Administrator	37,720	36,338	37,800
17	Senior administrator	37,800	37,800	37,800
18	Top career official	37,800	37,800	37,800

ACADEMIC SALARIES

- Faculty members suffered somewhat more from inflation in 1974-75 than wage and salary workers in general, according to the latest survey by the *American Association of University Professors* in their report on the economic status of the profession. Faculty salaries rose 5.8% in 1974 and total compensation including fringe benefits rose 6.4%, but the cost of living rose 11.1% reports AAUP.

For the first time, the AAUP salary survey includes separate figures for the salaries and compensation of men and women (Tables 109 and 110). The survey covers more than 275,000 faculty members, about 23% of them women.

On the average, women received 17.5% less compensation than men. AAUP attributes this difference to a number of cumulative handicaps. More women, proportionally, are on the faculties of institutions that pay the least - they constitute 40-60 percent of the faculty members in church-related and two year private colleges, which have the lowest average compensation, but less than 16% of the faculty members at private universities where the average salaries are highest. Proportionally more women are in the junior ranks. Only 12% of faculty women are full professors, compared with 31% of faculty men; 23% of the women are ranked as instructors compared with only 7% of the men.

Whatever their rank, women receive lower compensation on the average than men in the same rank. The only exception is among instructors in private, independent universities where women receive slightly higher compensation than men (Table 110). The compensation gap is largest at the top level where women who are full professors average 8.4% less than men at that rank.

Geographic location affects salary levels. The Middle Atlantic states led almost every category of institution and every rank in highest salaries paid (Table 111).

The average salary of all faculty members of all ranks in all kinds of colleges and universities is $16,403 for 1974-75. Fringe benefits bring the average total compensation to $18,709, with fringe benefits averaging 12.3% of compensation (Table 112).

Average faculty salaries and compensation in preclinical departments of medical schools are shown in Tables 113 and 114 respectively. Private medical schools continue to pay higher salaries at all ranks than public ones.

- According to preliminary data collected from colleges and universities by the *National Center for Educational Statistics*, the average salaries of instructional faculty rose approximately 10.5% from 1972 to 1974. Although there has been an increase in the percentages of women in all ranks, the salaries of women relative to men have not improved significantly in the two years. Women's salaries were 82.9% of men's in 1972, and are 83.2% in 1974.

For men, the mean (average) salary increase from 1972 to 1974 was 10.9%; for women 11.3%. Among the various academic ranks, instructors received the largest percentage increase - 22.9% for men and 16.5% for women for an average 20.3%. Salaries at public institutions rose faster than at private institutions (12.1% and 6.7%) during the two year period (Table 115).

- The *National Science Foundation's Manpower Characteristics System* (discussed on page 25) also reports salaries of doctoral scientists and engineers who are university or four year college teachers (Tables 116 through 118). In the fields reported, computer specialists had the highest salaries both on an academic year and on a calendar year basis, followed by engineers and economists.

- The median salary paid to faculty in four-year institutions (all ranks combined) was $24,373 during 1973-74, according to a survey by the *National Education Association*. The median paid to faculty in public four-year institutions was $14,827 and in nonpublic four-year institutions, $12,714.

By geographic area, the Mideastern states paid the highest median salaries at all ranks, followed by the far western states. The plains states paid the least (Table 119).

Table 127 shows median salaries of major administrative officers in higher education institutions, ranging from a high of $31,342 for the president or chancellor to a low of $14,700 for the head basketball coach.

- The mean salary of doctoral bioscientists by academic rank and sex for 1973 is shown in Table 120 and Chart 11. Women bioscientists consistently earn less at all ranks than do their male counterparts.

- The *American Mathematical Society's* 19th annual salary survey is based on returns from 912 departments in the mathematical sciences. Table 121 presents salary ranges for doctoral degree mathematics teachers by academic rank and type of institution, while Table 122 shows the comparable data for master's degree teachers.

- The *Engineering Manpower Commission*, as part of its collection of data for the professional income of engineers survey, compiled data on the *SALARIES OF ENGINEERS IN EDUCATION - 1974*. The 200 educational institutions providing data covered 11,287 engineering graduates. Salaries are presented by type of institution and rank and as a function of years since graduation (Tables 123 and 124).

As expected, Ph.D. schools paid the highest salaries in all ranks (Table 123).

- The *American Sociological Association* in its annual audit of undergraduate departments of sociology, found that men and women associate and assistant professors in sociology earn approximately the same salaries, with over 60% of associate professors earning between $15,000 and $20,000 and almost 90% of assistant professors in the $10,000 to $15,000 range. The differentials by sex are found among professors, lecturers and instructors (Table 125).

- Women's representation on faculties in Canada is even lower than in the United States and their average salary is nearly $4,000 less than that paid to men according to data compiled by *STATISTICS CANADA* and reported in the *CHRONICLE OF HIGHER EDUCATION*. Women constitute about 13% of Canadian faculties (as compared with 20% in the United States) and are concentrated in the lower ranks with only 5.3% of administrators being women. By field, the health professions paid the highest annual salaries to men, and although education paid the highest salaries to women of all fields studied, women still earned $2,556 less teaching in education than did men in 1973-74 (Table 126).

- The *U. S. Department of Health, Education and Welfare* in its *DIGEST OF EDUCATIONAL STATISTICS, 1974* presents estimated average annual salary of instructional staff in public elementary and secondary day schools by state (Table 128). Salaries ranged from a high in Alaska of $16,053 to a low in Mississippi of $7,865.

SOURCE: American Association of University Professors, Two Steps Backward: Report on the Economic Status of the Profession, 1974-75

TABLE 109 - WEIGHTED AVERAGE SALARIES OF FACULTY BY ACADEMIC RANK, CATEGORY*, TYPE OF AFFILIATION AND SEX, 1974-75

ACADEMIC RANK	All Combined		Public		Private Independent		Church-Related	
	Men	Women	Men	Women	Men	Women	Men	Women
CATEGORY I								
Professor	$22,990	$20,650	$22,750	$20,600	$24,680	$21,690	$20,900	$19,020
Associate Prof.	16,900	16,110	16,980	16,130	17,260	16,490	16,220	15,040
Assistant Prof.	13,950	13,190	14,000	13,220	13,870	13,280	13,390	12,620
Instructor	11,070	10,530	11,080	10,480	10,970	11,070	11,120	10,450
CATEGORY II-A								
Professor	21,290	20,660	21,680	21,100	20,540	19,190	18,290	16,410
Associate Prof.	16,690	16,380	16,950	16,790	16,110	15,400	14,930	13,630
Assistant Prof.	13,850	13,420	14,060	13,700	13,310	12,640	12,600	11,700
Instructor	11,550	11,050	11,730	11,260	11,210	10,640	10,450	10,000
CATEGORY II-B								
Professor	17,860	16,730	18,290	17,200	19,360	18,680	16,890	15,450
Associate Prof.	14,320	13,420	15,390	14,690	14,770	14,200	13,560	12,640
Assistant Prof.	12,160	11,550	12,970	12,360	12,430	11,930	11,590	10,940
Instructor	10,410	9,900	10,790	10,350	10,840	10,280	9,950	9,460
CATEGORY III								
Professor	20,430	19,790	20,540	20,060	°	°	°	°
Associate Prof.	16,480	16,290	16,610	16,600	12,370	11,520	12,000	11,280
Assistant Prof.	14,020	13,920	14,120	14,050	11,010	10,580	9,970	9,860
Instructor	11,740	11,200	11,900	11,440	7,760	7,700	8,950	8,880
CATEGORY IV								
No Rank	14,980	13,630	15,100	13,770	13,260	12,490	9,670	9,310

* Category I - includes institutions which offer the doctorate degree, and which conferred in the most recent three years an annual average of fifteen or more earned doctorates covering a minimum of three nonrelated disciplines; Category II-A - includes institutions awarding degrees above the baccalaureate but not included in Category I; Category II-B - includes institutions awarding only the baccalaureate or equivalent degree; Category III - includes two-year institutions; and Category IV - includes institutions without academic ranks.

° Sample too small to be meaningful

SOURCE: American Association of University Professors, Two Steps Backward: Report on the Economic Status of the Profession, 1974-75

TABLE 110 - WEIGHTED AVERAGE FACULTY COMPENSATION BY ACADEMIC RANK, CATEGORY*, TYPE OF AFFILIATION AND SEX, 1974-75

(Standard Academic Year Basis)

ACADEMIC RANK	All Combined		Public		Private Independent		Church-Related	
	Men	Women	Men	Women	Men	Women	Men	Women
CATEGORY I								
Professor	$26,060	$23,330	$25,590	$23,150	$28,870	$25,190	$23,680	$21,550
Associate Prof.	19,150	18,250	19,070	18,2[illegible]	19,960	19,070	18,510	17,210
Assistant Prof.	15,860	15,010	15,890	15,040	15,920	15,200	15,270	14,420
Instructor	12,580	11,950	12,620	11,910	12,270	12,490	12,620	11,830
CATEGORY II-A								
Professor	24,110	23,360	24,430	23,790	23,940	22,330	21,050	18,730
Associate Prof.	19,050	18,690	19,300	19,130	18,690	17,880	17,160	15,490
Assistant Prof.	15,830	15,360	16,060	15,670	15,310	14,580	14,440	13,350
Instructor	13,160	12,550	13,400	12,830	12,640	11,910	11,780	11,190
CATEGORY II-B								
Professor	20,570	19,110	20,410	19,070	22,470	21,840	19,610	17,610
Associate Prof.	16,460	15,340	17,400	16,610	17,090	16,450	15,670	14,430
Assistant Prof.	13,890	13,160	14,730	13,980	14,270	13,760	13,260	12,450
Instructor	11,740	11,140	12,210	11,710	12,280	11,690	11,160	10,540
CATEGORY III								
Professor	23,300	22,490	23,430	22,800	°	°	°	°
Associate Prof.	18,840	18,620	18,990	18,970	14,350	13,290	13,650	12,800
Assistant Prof.	16,140	16,030	16,260	16,190	12,810	12,070	11,200	11,010
Instructor	13,360	12,770	13,550	13,070	8,700	8,600	9,860	9,740
CATEGORY IV								
No Rank	16,760	15,240	16,870	15,390	15,440	14,260	10,930	10,440

* Category I - includes institutions which offer the doctorate degree, and which conferred in the most recent three years an annual average of fifteen or more earned doctorates covering a minimum of three nonrelated disciplines; Category II-A - includes institutions awarding degrees above the baccalaureate but not included in Category I; Category II-B - includes institutions awarding only the baccalaureate or equivalent degree; Category III - includes two-year institutions; and Category IV - includes institutions without academic ranks.

° Sample too small to be meaningful

SOURCE: American Association of University Professors, Two Steps Backward: Report on the Economic Status of the Profession, 1974-75

TABLE III - AVERAGE FACULTY SALARIES BY REGION[1], CATEGORY[2], AND ACADEMIC RANK, 1974-75

ACADEMIC RANK	WEST		NORTH CENTRAL		NORTH EAST		SOUTH		
	Pacific	Mountain	West N. Central	East N. Central	Middle Atlantic	New England	West S. Central	East S. Central	South Atlantic
CATEGORY I									
Professor	$23,880	$20,730	$21,170	$23,090	$25,570	$25,280	$20,930	$20,870	$23,350
Assoc. Prof.	16,770	15,970	16,180	16,910	18,400	17,800	16,180	16,430	17,180
Ass't. Prof.	13,930	13,360	13,420	13,840	14,400	13,990	13,300	13,520	14,120
Instructor	10,680	10,660	10,580	10,860	11,430	11,320	10,470	10,480	10,870
All Ranks	19,080	16,430	16,580	17,650	18,940	18,980	16,280	16,180	14,470
CATEGORY II-A									
Professor	21,970	18,370	18,040	20,270	23,940	21,620	17,110	17,010	19,920
Assoc. Prof.	16,550	15,310	14,690	16,080	18,820	17,050	14,500	14,990	16,280
Ass't. Prof.	13,650	12,890	12,740	13,450	15,190	13,980	12,410	12,680	13,370
Instructor	11,780	10,720	10,430	11,140	12,690	11,460	10,000	10,280	10,930
All Ranks	17,450	14,710	14,100	15,540	18,080	16,060	13,540	13,910	15,070
CATEGORY II-B									
Professor	18,750	16,660	16,650	17,940	19,430	19,610	15,420	15,560	17,420
Assoc. Prof.	14,070	13,720	13,150	14,430	15,300	14,900	13,360	12,700	14,190
Ass't. Prof.	11,930	11,660	11,530	12,300	12,630	12,490	11,700	10,870	11,910
Instructor	10,050	9,680	10,490	10,570	10,650	10,420	9,810	9,280	10,000
All Ranks	14,230	12,940	12,810	13,930	14,530	14,570	12,440	12,080	13,330
CATEGORY III									
Professor	21,180	17,640	13,650	21,140	22,730	19,390	15,650	12,330	19,910
Assoc. Prof.	19,310	14,330	12,990	18,700	17,950	15,640	13,550	11,660	16,460
Ass't. Prof.	16,780	11,180	11,770	15,820	15,640	13,370	11,310	10,370	13,300
Instructor	14,370	11,910	9,300	12,210	12,630	11,400	10,220	9,580	10,850
All Ranks	17,850	15,580	11,630	15,750	16,580	13,910	11,730	10,610	14,440
CATEGORY IV									
No Rank	17,060	12,270	13,570	15,470	14,060	11,930	10,940	11,760	11,300

[1] Regions included: Pacific, Mountain, West North Central, East North Central, Middle Atlantic, New England, West South Central, East South Central and South Atlantic

[2] Category I - includes institutions which offer the doctorate degree, and which conferred in the most recent three years an annual average of fifteen or more earned doctorates covering a minimum of three nonrelated disciplines; Category II-A - includes institutions awarding degrees above the baccalaureate but not included in Category I; Category II-B - includes institutions awarding only the baccalaureate or equivalent degree; Category III - includes two-year institutions; and Category IV - includes institutions without academic ranks.

SOURCE: American Association of University Professors, Two Steps Backward: Report on the Economic Status of the Profession, 1974-1975

TABLE 112 - NUMBER, AVERAGE SALARY, FRINGE BENEFITS AND COMPENSATION OF FULL-TIME FACULTY MEMBERS IN INSTITUTIONS OF HIGHER EDUCATION BY RANK, 1974-75

ACADEMIC RANK	Total Full-Time Faculty Members	Average Salary	Average Fringe Benefits	Average Compensation	Fringe Benefits As a % of Average Comp.
Professor	76,483	$21,870	$3,006	$24,876	12.1
Associate Professor	74,994	16,495	2,329	18,824	12.4
Assistant Professor	91,158	13,578	1,957	15,535	12.6
Instructor	28,888	11,005	1,519	12,524	12.1
Lecturer	3,791	13,334	2,131	15,465	13.8
All Ranks	275,314	16,403	2,306	18,709	12.3

TABLE 113 - AVERAGE FACULTY SALARIES IN PRECLINICAL DEPARTMENTS OF MEDICAL SCHOOLS BY REGION, TYPE OF AFFILIATION AND ACADEMIC RANK, 1974-75

ACADEMIC RANK	ALL COMBINED		NON-SOUTH[1]		SOUTH AND BORDER[2]	
	Public	Private	Public	Private	Public	Private
Professor	$30,090	$30,330	$30,160	$30,700	$29,960	$29,540
Associate	23,420	23,360	23,350	23,400	23,510	23,290
Assistant	18,920	18,660	18,740	18,860	19,510	18,300
Instructor	13,810	14,240	13,940	13,480	13,690	14,830
All Ranks	22,910	23,080	23,190	23,530	22,560	22,290

TABLE 114 - AVERAGE FACULTY COMPENSATION IN PRECLINICAL DEPARTMENTS OF MEDICAL SCHOOLS BY REGION, TYPE OF AFFILIATION AND ACADEMIC RANK, 1974-75

ACADEMIC RANK	ALL COMBINED		NON-SOUTH[1]		SOUTH AND BORDER[2]	
	Public	Private	Public	Private	Public	Private
Professor	$33,730	$34,990	$34,220	$35,620	$32,940	$33,710
Associate	26,460	26,860	26,830	27,040	25,990	26,520
Assistant	21,390	21,470	21,470	21,790	21,290	20,890
Instructor	15,710	15,400	16,060	15,600	15,370	15,250
All Ranks	25,830	26,520	26,480	27,220	24,970	25,270

[1] Sample includes 83 Medical Schools (32 Private and 51 Public) submitting data for their preclinical departments.

[2] South and Border include the following states: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

SOURCE: National Center for Educational Statistics, Unpublished Data

TABLE 115 - NUMBER AND AVERAGE SALARY OF FULL-TIME INSTRUCTIONAL FACULTY ON 9-10 MONTH CONTRACTS, BY LEVEL OF INSTITUTION, RANK AND SEX, 1974-1975

RANK AND SEX	TOTAL		UNIVERSITIES		OTHER 4-YEAR		2-YEAR	
	No. of Faculty	Average Salary	No. of Faculty	Average Salary	No. of Faculty	Average Salary	No. of Faculty	Average Salary
Total	255,504	$15,258	92,086	$16,630	109,781	$14,367	53,637	$14,731
Men	192,612	15,924	74,448	17,372	82,412	14,913	35,752	15,239
Women	62,892	13,222	17,638	13,496	27,369	12,722	17,885	13,718
Professors	52,916	20,662	26,338	22,485	23,418	18,926	3,160	18,343
Men	47,414	20,920	24,613	22,648	20,426	19,099	2,375	18,649
Women	5,502	18,431	1,725	20,071	2,992	15,218	785	17,417
Associate Professors	59,104	15,941	25,165	16,593	29,259	15,259	4,680	16,569
Men	48,977	16,089	21,644	16,732	23,815	15,428	3,517	16,614
Women	10,127	15,163	3,521	15,733	5,443	14,523	1,163	16,435
Assistant Professors	77,009	13,107	29,373	13,569	40,446	12,775	7,170	13,713
Men	56,044	13,285	22,217	13,761	29,106	12,840	4,701	13,813
Women	20,965	12,636	7,156	12,972	11,340	12,233	2,469	13,522
Instructors	51,171	12,780	9,212	10,706	14,351	10,400	27,608	14,708
Men	30,269	13,469	4,713	10,944	7,585	10,630	17,971	15,344
Women	20,902	11,771	4,499	10,457	6,766	10,154	9,637	13,521
Lecturers	2,446	11,954	1,606	12,292	656	11,463	184	10,749
Men	1,473	12,688	1,022	12,880	364	12,374	87	11,753
Women	973	10,842	584	11,264	292	10,330	97	9,847
Undesignated Rank	12,834	13,299	392	12,138	1,607	10,936	10,835	13,693
Men	8,429	13,733	239	13,305	1,089	11,170	7,101	14,142
Women	4,405	12,469	153	10,315	518	10,445	3,734	12,841

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1973 Detailed Statistical Tables, Appendix B, NSF 75-312-A

TABLE 116 - MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE UNIVERSITY OR 4-YEAR COLLEGE TEACHERS BY FIELD, SALARY BASE AND ACADEMIC RANK, 1973

Field and Salary Base	Total	Academic Rank						No Report
		Prof.	Assoc. Prof.	Asst. Prof.	Instr.	Lect.	Other	
ALL FIELDS								
Academic Year	15,900	19,700	15,600	12,700	11,200	13,000	-	15,800
Calendar Year	19,600	24,300	18,900	16,200	12,700	15,900	17,100	14,200
No Report	17,300	21,300	16,500	13,900	-	-	13,800	18,800
Physical Scientists								
Academic Year	15,200	19,400	14,500	12,500	-	-	-	-
Calendar Year	19,100	24,600	17,900	14,900	-	-	14,200	-
No Report	16,800	19,100	-	-	-	-	-	-
Chemists								
Academic Year	14,700	18,700	13,800	12,500	-	-	-	-
Calendar Year	18,700	23,100	17,500	14,600	-	-	-	-
No Report	16,800	-	-	-	-	-	-	-
Physicists & Astronomers								
Academic Year	15,900	20,400	15,500	12,600	-	-	-	-
Calendar Year	20,100	26,300	18,700	15,500	-	-	13,600	-
No Report	16,800	-	-	-	-	-	-	-
Mathematical Scientists								
Academic Year	15,500	21,000	16,000	12,700	-	-	-	-
Calendar Year	19,000	24,400	18,000	13,600	-	-	-	-
No Report	16,200	-	-	-	-	-	-	-
Mathematicians								
Academic Year	15,400	20,800	15,900	12,700	-	-	-	-
Calendar Year	18,600	24,900	17,900	13,600	-	-	-	-
No Report	15,900	-	-	-	-	-	-	-
Statisticians								
Academic Year	16,400	22,200	16,500	12,900	-	-	-	-
Calendar Year	20,300	-	-	-	-	-	-	-
No Report	-	-	-	-	-	-	-	-
Computer Specialists								
Academic Year	17,500	22,100	17,100	13,400	-	-	-	-
Calendar Year	24,800	-	-	-	-	-	-	-
No Report	-	-	-	-	-	-	-	-

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1973, Detailed Statistical Tables, Appendix B, NSF 75-312-A

TABLE 117 - MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE UNIVERSITY OR 4-YEAR COLLEGE TEACHERS BY FIELD, SALARY BASE AND ACADEMIC RANK, 1973

Field and Salary Base	Total	Academic Rank						No Report
		Prof.	Assoc. Prof.	Asst. Prof.	Instr.	Lect.	Other	
Environmental Scientists								
Academic Year	15,100	19,100	14,700	12,500	-	-	-	-
Calendar Year	20,300	23,300	18,500	15,500	-	-	-	-
No Report	-	-	-	-	-	-	-	-
Earth Scientists								
Academic Year	14,900	18,900	14,400	12,600	-	-	-	-
Calendar Year	20,200	23,000	18,500	16,000	-	-	-	-
No Report	-	-	-	-	-	-	-	-
Oceanographers								
Academic Year	16,200	-	-	-	-	-	-	-
Calendar Year	18,500	-	-	-	-	-	-	-
No Report	-	-	-	-	-	-	-	-
Atmospheric Scientists								
Academic Year	-	-	-	-	-	-	-	-
Calendar Year	-	-	-	-	-	-	-	-
No Report	-	-	-	-	-	-	-	-
Engineers								
Academic Year	17,300	20,600	16,800	13,000	-	-	-	-
Calendar Year	21,600	26,800	19,400	17,000	-	-	-	-
No Report	17,400	-	-	-	-	-	-	-
Life Scientists								
Academic Year	15,100	18,700	14,700	12,600	-	-	-	-
Calendar Year	19,500	24,000	18,900	16,700	12,900	-	14,800	16,500
No Report	16,900	21,300	17,000	15,100	-	-	-	-
Biological Scientists								
Academic Year	15,000	18,700	14,400	12,600	-	-	-	-
Calendar Year	19,300	24,300	19,200	16,600	13,300	-	13,900	15,600
No Report	16,400	21,000	16,600	14,600	-	-	-	-
Agricultural Scientists								
Academic Year	15,800	17,600	16,500	-	-	-	-	-
Calendar Year	18,900	22,000	17,500	15,500	-	-	-	-
No Report	-	-	-	-	-	-	-	-

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1973, Detailed Statistical Tables, Appendix B, NSF 75-312-A

TABLE 118 - MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE UNIVERSITY OR 4-YEAR COLLEGE TEACHERS BY FIELD, SALARY BASE AND ACADEMIC RANK, 1973

Field and Salary Base	Total	Academic Rank						No Report
		Prof.	Assoc. Prof.	Asst. Prof.	Instr.	Lect.	Other	
Medical Scientists								
Academic Year	16,400	19,500	16,800	12,800	-	-	-	-
Calendar Year	21,600	27,100	21,300	17,700	-	-	-	-
No Report	-	-	-	-	-	-	-	-
Psychologists								
Academic Year	15,800	19,500	15,500	12,700	--	-	-	-
Calendar Year	19,000	23,600	19,400	16,000	-	-	17,700	-
No Report	18,100	-	-	-	-	-	-	-
Social Scientists								
Academic Year	16,200	19,900	15,700	12,700	-	-	-	-
Calendar Year	19,600	23,600	18,500	14,100	-	-	21,400	-
No Report	18,000	22,900	16.100	-	-	-	-	-
Economists								
Academic Year	17,300	20,100	16,600	13,200	-	-	-	-
Calendar Year	20,800	22,800	-	-	-	-	-	-
No Report	-	-	-	-	-	-	-	-
Sociologists/Anthro								
Academic Year	15,700	19,900	15,600	12,600	-	-	-	-
Calendar Year	18,900	23,900	18,800	14,400	-	-	-	-
No Report	19,000	-	-	-	-	-	--	-
Other Social Scientists								
Academic Year	15,500	19,700	15,200	12,500	-	-	-	-
Calendar Year	19,500	23,800	17,500	13,800	-	-	-	-
No Report	16,400	-	-	-	-	-	-	-
No Report								
Academic Year	-	-	-	-	-	-	-	-
Calendar Year	-	-	-	-	-	-	-	-
No Report	-	-	-	-	-	-	-	-

NOTE: Includes individuals reporting Teaching as their primary or secondary work activity. All median salaries were computed only for full-time employed civilians. No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Education Association, Salaries Paid & Salary-Related Practices in Higher Education, 1973-74

TABLE 119 - MEDIAN FACULTY SALARIES PAID IN INSTITUTIONS GRANTING THE 4-YEAR BACHELOR'S OR HIGHER DEGREE BY REGION AND ACADEMIC RANK, 1973-1974

ACADEMIC RANK	GEOGRAPHIC AREA							
	New England	Mideast	South-East	Great Lakes	Plains	South-West	Rocky Mountain	Far West
Professor	$20,509	$21,658	$18,293	$19,884	$18,267	$18,727	$18,163	$21,638
Associate Professor	15,889	16,966	14,704	15,345	14,386	14,864	14,337	15,576
Assistant Professor	12,779	13,389	12,187	12,724	11,980	12,330	12,002	13,084
Instructor and Lecturers	10,810	11,411	9,638	10,302	9,755	9,660	9,579	10,644
All Ranks Combined	14,264	15,615	13,454	14,502	13,414	13,967	13,885	15,515

SOURCE: U. S. Department of Health, Education and Welfare, National Institutes of Health, Analysis of Sex Differentials Among Ph.D.-Holding Scientists: Salary, Academic Rank, and Predoctoral Awards, Resources Analysis Memo No. 16, May 1975

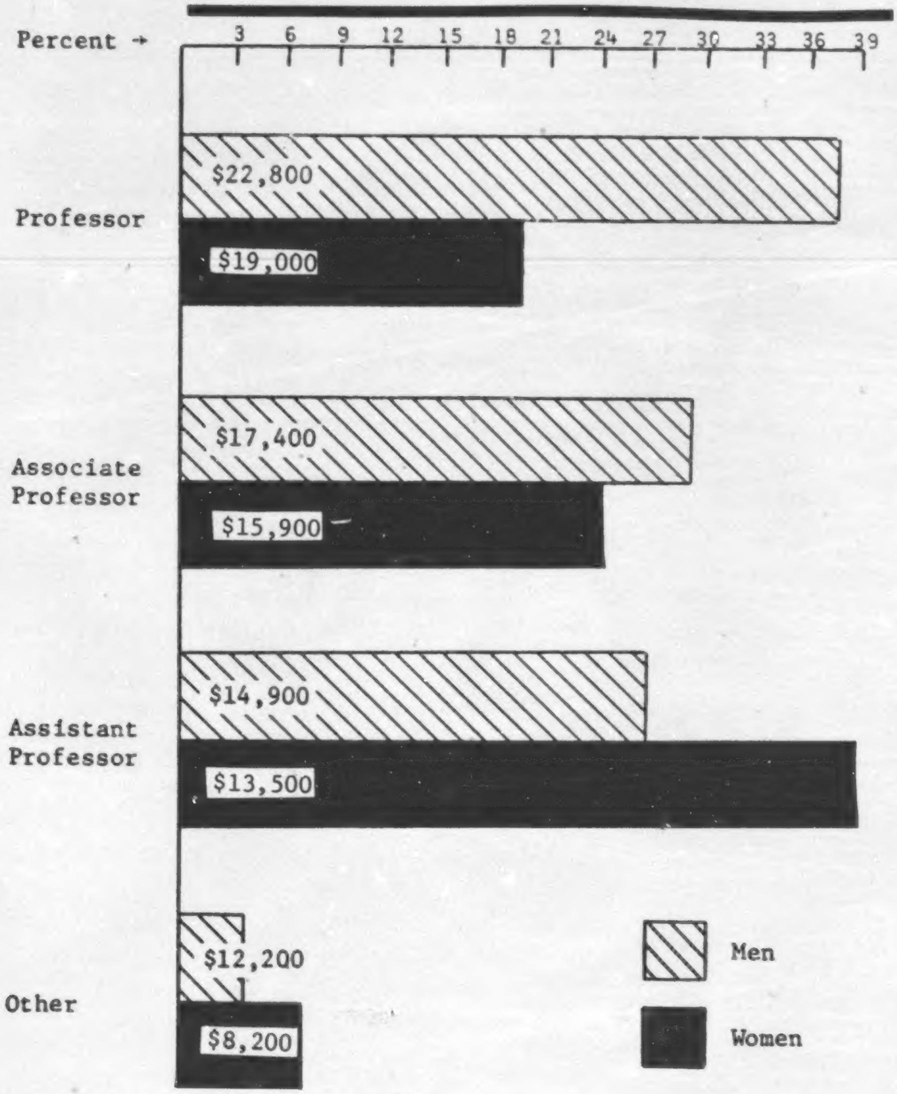
TABLE 120 - MEAN SALARY AND ACADEMIC RANK OF DOCTORAL BIOSCIENTISTS BY SEX AND YEAR OF DOCTORATE COHORT, 1973

YEAR OF DOCTORATE	MEN		WOMEN	
	Rank	Salary	Rank	Salary
1950 or earlier	3.9	$23,900	3.5	$17,100
1951-60	3.7	23,800	3.4	17,100
1961-65	3.2	18,500	2.9	15,000
1966-70	2.5	15,100	2.6	12,800
1971-72	2.5	11,900	2.6	9,500

4 = Professor
3 = Associate Professor
2 = Assistant Professor
1 = Instructor

SOURCE: U. S. Department of Health, Education and Welfare, National Institutes of Health, Analysis of Sex Differentials Among Ph.D.-Holding Scientists: Salary Academic Rank, and Predoctoral Awards, Resources Analysis Memo No. 16, May 1975

CHART 11 - PERCENT DISTRIBUTION AND AVERAGE SALARY OF DOCTORAL BIOSCIENTISTS BY ACADEMIC RANK AND SEX, 1973



SOURCE: The American Mathematical Society NOTICES, Vol. 22, No. 6, Issue No. 164, October 1975, pp. 303-306

TABLE 121 - NUMBER AND MEDIAN SALARY RANGES FOR DOCTORAL DEGREE MATHEMATICS TEACHERS BY RANK, 1974-75 AND 1975-76

TYPE OF INSTITUTION	DOCTORAL DEGREE RANK	1974 - 1975			1975 - 1976		
		NUMBER OF FACULTY		MEDIAN RANGES	NUMBER OF FACULTY		MEDIAN RANGES
		Total	Women		Total	Women	
Doctorate Granting Departments GROUP I	Instructor	64	6	$11,000-12,400	51	6	$11,600-13,000
	Assistant Professor	194	6	12,900-14,100	194	14	13,100-15,100
	Associate Professor	192	5	16,100-18,500	197	4	17,300-19,000
	Professor	477	7	24,100-29,400	490	8	26,000-31,000
Doctorate Granting Departments GROUP II	Instructor	23	1	-	32	4	-
	Assistant Professor	237	19	12,500-14,400	218	16	13,500-15,000
	Associate Professor	339	12	16,200-17,700	333	12	17,100-18,700
	Professor	358	8	22,700-26,000	392	10	23,400-26,500
Doctorate Granting Departments GROUP III	Instructor	11	2	-	11	2	-
	Assistant Professor	513	34	12,900-14,200	474	34	13,700-15,300
	Associate Professor	606	27	16,400-18,000	628	25	17,200-18,900
	Professor	472	11	21,300-25,200	517	13	22,400-26,500
Doctorate Granting Departments GROUP IV	Instructor	3	0	-	6	0	-
	Assistant Professor	112	11	12,800-14,800	111	12	13,500-15,400
	Associate Professor	117	3	16,700-19,200	120	3	17,800-20,000
	Professor	182	5	23,000-27,600	188	6	24,300-29,800
Doctorate Granting Departments GROUP V	Instructor	4	0	-	7	1	-
	Assistant Professor	156	11	14,000-15,300	158	9	14,500-16,100
	Associate Professor	94	3	17,500-19,700	99	3	17,600-21,400
	Professor	134	3	23,000-27,600	140	4	24,400-29,500
Doctorate Granting Departments GROUP VI	Instructor	2	0	-	1	1	-
	Assistant Professor	126	5	12,600-15,600	111	3	14,300-18,000
	Associate Professor	175	3	15,200-20,500	195	4	18,000-23,900
	Professor	113	1	23,200-27,700	120	0	26,300-32,400
Master's Degree Granting Departments	Instructor	17	5	-	21	4	-
	Assistant Professor	624	59	12,700-14,300	587	63	13,400-15,200
	Associate Professor	624	55	15,000-17,600	678	57	16,100-18,600
	Professor	469	27	18,500-22,400	488	26	19,700-23,200
Bachelor's Degree Granting Departments	Instructor	9	4	-	7	1	-
	Assistant Professor	416	39	11,500-13,200	426	49	12,000-14,000
	Associate Professor	323	29	13,700-15,900	363	28	14,100-17,000
	Professor	298	33	16,500-21,100	308	30	17,200-22,100

SOURCE: The American Mathematical Society NOTICES, Vol. 22, No. 6, Issue No. 164, October 1975, pp. 303-306

TABLE 122 - NUMBER AND MEDIAN SALARY RANGES FOR NON-PH.D. DEGREE MATHEMATICS TEACHERS BY RANK, 1974-75 AND 1975-76

TYPE OF INSTITUTION	NON-PH.D. DEGREE RANK	1974 - 1975			1975 - 1976		
		NUMBER OF FACULTY		MEDIAN RANGES	NUMBER OF FACULTY		MEDIAN RANGES
		Total	Women		Total	Women	
Doctorate Granting Departments GROUP II	Instructor	29	10	$ 9,000-13,000	26	10	$10,800-13,800
	Assistant Professor	4	1	-	7	1	-
	Associate Professor	1	0	-	1	0	-
Doctorate Granting Departments GROUP III	Instructor	68	24	9,400-12,000	57	23	9,700-11,500
	Assistant Professor	93	31	12,200-14,100	83	30	13,100-15,600
	Associate Professor	62	5	14,900-17,300	64	5	15,700-18,200
	Professor	16	1	-	15	1	-
Doctorate Granting Departments GROUP IV	Instructor	16	6	-	11	5	-
	Assistant Professor	9	4	-	9	4	-
	Associate Professor	3	2	-	4	2	-
	Professor	6	1	-	6	1	-
Master's Degree Granting Departments	Instructor	173	86	9,600-12,100	163	73	10,000-12,500
	Assistant Professor	300	72	11,700-13,800	291	75	12,600-14,900
	Associate Professor	187	24	13,800-16,400	188	21	14,300-17,900
	Professor	46	2	17,100-21,000	38	3	19,000-22,500
Bachelor's Degree Granting Departments	Instructor	118	52	9,300-11,400	112	52	10,000-12,000
	Assistant Professor	325	67	10,800-13,300	279	57	11,500-14,200
	Associate Professor	218	28	12,100-15,200	218	28	12,900-16,600
	Professor	53	8	13,900-19,900	55	7	15,000-20,700
Two-Year Colleges	No Rank Designation	1,523	266	11,300-15,700	1,462	276	12,000-16,200

SOURCE: Engineering Manpower Commission, Salaries of Engineers in Education, 1974

TABLE 123 - NUMBER AND MEDIAN SALARIES OF ENGINEERING FACULTY BY RANK, TYPE OF INSTITUTION AND MONTHS ON CONTRACT, 1974

TYPE OF INSTITUTION	Instructor	Assistant Professor	Associate Professor	Professor	Administrator	Researcher
ALL SCHOOLS						
9-10 Month Contract	(339) $11,200	(1,935) $14,250	(3,134) $16,900	(3,273) $21,350	(200) $23,800	(42) $14,500
11-12 Month Contract	(20) 11,150	(73) 16,850	(91) 19,650	(109) 23,950	(675) 27,750	(598) 15,750
PH.D. SCHOOLS						
9-10 Month Contract	(283) 10,850	(1,560) 14,450	(2,611) 17,100	(2,828) 21,600	(162) 24,500	(39)
11-12 Month Contract	(16)	(57)	(67)	(103)	(529) 28,650	(588) 15,750
NON-PH.D. SCHOOLS						
9-10 Month Contract	(56) 11,950	(375) 13,550	(523) 15,950	(445) 20,150	(38) 22,200	(3)
11-12 Month Contract	(4)	(16)	(24)	(6)	(146) 24,350	(10) 26,000
TECHNICAL SCHOOLS						
9-10 Month Contract	(35) 11,900	(160) 12,800	(145) 14,700	(39) 17,600	(10) 18,000	(2)
11-12 Month Contract	(44)	(26)	(10)	(15)	(32) 21,000	(3)

TABLE 124 - NUMBER AND MEDIAN ANNUAL SALARIES OF FACULTY IN ALL ENGINEERING SCHOOLS BY NINE-MONTH CONTRACT, RANK AND SELECTED YEARS SINCE BACCALAUREATE, 1974

RANK	YEARS SINCE BACCALAUREATE								
	3	5	7	9-11	15-17	18-20	21-23	24-26	35+
Professors				(14) $18,700	(314) $20,150	(383) $20,800	(400) $21,350	(503) $21,800	(637) $22,250
Associate Professors			(10) $16,050	(264) 16,450	(635) 17,050	(423) 17,250	(328) 17,300	(218) 17,250	(179) 15,750
Assistant Professors	(7) $13,050	(46) $13,550	(105) 13,950	(523) 14,300	(183) 14,550	(117) 14,450	(83) 14,250	(67) 14,050	(53) 13,350
Instructors	(8) 10,550	(17) 10,700	(22) 10,900	(59) 11,100	(26) 11,550	(25) 11,750	(15) 11,900	(23) 12,100	(18) 12,600
Administrators*				(9) 22,400	(55) 25,650	(74) 26,900	(86) 27,850	(90) 28,500	(114) 28,450
Researchers*	(19) 11,450	(23) 12,250	(22) 13,050	(84) 14,300	(66) 16,850	(46) 18,000	(49) 19,050	(36) 19,800	(31) 18,600

* Salaries are for a 12-month contract.

SOURCE: American Sociological Association, ASA Footnotes, February 1975

TABLE 125 - FACULTY SALARIES IN UNDERGRADUATE SOCIOLOGY DEPARTMENTS BY RANK AND SEX, (PERCENTAGES), 1974

RANK	MALE	FEMALE
PROFESSOR		
$30,000 and Over	6.0	4.2
20,000 to 29,999	56.1	26.5
15,000 to 19,999	34.7	39.3
10,000 to 14,999	3.0	24.5
9,999 or Less	0.1	5.4
ASSOCIATE PROFESSOR		
$20,000 to 28,999	4.5	4.7
15,000 to 19,999	64.6	63.7
10,000 to 14,999	30.3	30.0
9,999 or Less	0.5	1.6
ASSISTANT PROFESSOR		
$20,000 to 21,999	0.3	0.3
15,000 to 19,999	8.9	5.8
10,000 to 14,999	88.0	89.6
9,999 or Less	3.0	4.3
LECTURERS AND INSTRUCTORS		
$20,000 to 20,999	0.3	0.0
15,000 to 19,999	4.2	2.0
10,000 to 14,999	58.2	46.3
9,999 or Less	37.5	51.7

SOURCE: CHRONICLE OF HIGHER EDUCATION, Volume XI, Number 9, November 10, 1975, from Statistics Canada

TABLE 126 - AVERAGE FACULTY SALARIES IN CANADA BY FIELD AND SEX, 1971-72 AND 1973-74

FIELD	1971-72			1973-74		
	Male	Female	All	Male	Female	All
Education	$16,390	$13,802	$15,841	$18,367	$15,811	$17,831
Fine and Applied Arts	14,217	12,162	13,868	16,030	14,191	15,690
Humanities	15,347	12,641	14,881	17,562	14,675	17,086
Social Sciences	15,968	13,201	15,695	18,055	14,938	17,736
Biological Sciences	17,044	13,548	16,481	19,235	15,534	18,666
Engineering & Applied Science	17,123	13,748	17,090	19,463	15,211	19,431
Health Professions	20,350	13,033	18,889	22,518	14,876	20,975
Math & Physical Science	16,752	12,300	16,579	18,956	14,245	18,788
TOTAL	16,726	13,047	16,249	18,866	14,940	18,354

SOURCE: National Education Association, Salaries Paid and Salary-Related Practices in Higher Education, 1973-74, Research Memo 1974-1, November 1974

TABLE 127 - NUMBER AND SALARIES PAID TO ADMINISTRATIVE OFFICERS CONTINUING IN THE SAME POSITION FOR INSTITUTIONS GRANTING THE BACHELOR'S OR HIGHER DEGREE, 1973-74

POSITION	Number of Persons	Median Salary	Average Increase As Percent of Average Salary
President or Chancellor	800	$31,342	5.4
Executive Vice President	172	27,667	5.5
Assistant to the President	341	17,688	6.9
Planning Vice President or Director	144	24,750	5.9
Organized Research Vice President or Director	95	28,050	5.3
Institutional Research Director	225	19,321	5.8
Academic Vice President or Provost	437	28,614	5.7
Dean of Administration or Dean of Faculty or Dean of Instruction	273	21,271	5.8
Dean of the College (for colleges only)	194	22,000	5.5
Student Personnel Services (Vice President or Director (Chief Student Affairs Officer)	673	19,117	6.4
Dean of Men	270	14,500	5.9
Dean of Women	309	13,196	6.1
Dean or Director of Admissions	678	15,773	6.0
Registrar or Director of Registration	695	14,443	6.3
Dean or Director of Student Placement	438	14,588	6.3
Dean or Director of Student Testing/Counseling	393	17,050	5.5
Director of Student Financial Aid	618	13,000	7.0
Business Vice President or Business Manager	769	21,039	6.0
Development Vice President or Director	506	19,235	5.7
Budget Officer or Director	181	18,271	7.1
Controller	362	17,219	6.8
Director of Non-Academic Personnel	303	15,194	7.3
Public Relations Vice President or Director	441	15,523	5.8
Alumni Services Director	409	13,080	6.0
Director of Information	288	13,955	5.9
Director of Libraries or Chief Librarian	787	16,417	5.7
Director of Evening School	108	17,375	6.0
Director of Extension	150	22,000	6.1
Director of Athletics	465	17,515	5.2
Head Football Coach	247	16,159	5.6
Head Basketball Coach	340	14,700	6.0

SOURCE: U.S. Department of Health Education & Welfare Education Division, Digest of Educational Statistics, 1974, NCES 75-210, p. 50

TABLE 128 - ESTIMATED AVERAGE ANNUAL SALARY OF TOTAL INSTRUCTIONAL STAFF* IN FULL-TIME PUBLIC ELEMENTARY AND SECONDARY DAY SCHOOLS BY STATE, 1973-1974

STATE	SALARY	STATE	SALARY
United States	$11,185	Missouri	$ 9,823
Alabama	9,443	Montana	9,772
Alaska	16,053	Nebraska	9,541
Arizona	10,943	Nevada	°
Arkansas	8,139	New Hampshire	9,331
California	13,875	New Jersey	12,000
Colorado	10,757	New Mexico	9,300
Connecticut	11,660	New York	13,300
Delaware	11,860	North Carolina	9,823
District of Columbia	13,412	North Dakota	8,790
Florida	10,954	Ohio	10,750
Georgia	9,110	Oklahoma	8,500
Hawaii	11,968	Oregon	10,265
Idaho	8,696	Pennsylvania	11,400
Illinois	12,261	Rhode Island	11,709
Indiana	10,828	South Carolina	9,046
Iowa	10,580	South Dakota	8,500
Kansas	9,420	Tennessee	9,150
Kentucky	8,557	Texas	9,301
Louisiana	9,500	Utah	9,685
Maine	9,547	Vermont	9,189
Maryland	12,310	Virginia	10,300
Massachusetts	11,710	Washington	11,935
Michigan	13,050	West Virginia	8,840
Minnesota	11,730	Wisconsin	11,637
Mississippi	7,865	Wyoming	10,164

* Includes supervisors, principals, classroom teachers, and other instructional staff

° Data Not Available

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